DE

BOROUGH OF DARWEN.

REPORT

OF

F. G. HAWORTH, M.B.C.M., L.R.C.S., D.P.H.,

MEDICAL OFFICER OF HEALTH.

FOR THE

YEAR ENDING DECEMBER 31st, 1895.

DARWEN:
N. LEACH, PRINTER AND BOOKBINDER, "ADVERTISER" OFFICE, BOLTON ROAD.

1896.

VALE HOUSE, DARWEN,
FEBRUARY, 1896.

To the Chairman and Members of the Health Committee.

GENTLEMEN,

I have the honour to present to you my First Annual Report, for the year ending December 31st, 1895.

I am,
Gentlemen,
Your obedient servant,
F. G. HAWORTH,
MEDICAL OFFICER OF HEALTH,
DARWEN URBAN SANITARY AUTHORITY.

RAINFALL.

The following particulars have been supplied to me by the Rev. W. H. Blamire, St. James' Vicarage :—

	INCHES.	GREATEST FALL IN 24 HOURS.	
January	3·32	16th	0·54 inch.
February	0·42	28th	0-21 ,,
March	4·54	23rd	0·77 ,,
April	3·43	5th	0·63 ,,
May	0·64	30th	0·14 ,,
June	2·51	26th	0·56 ,,
July	6·27	2nd	0·78 ,,
August	4·61	26th	1·10 ,,
September	1·59	6th	0 75 ,,
October	5·46	3rd	0.95 ,,
November	4·31	16th	0·54 ,,
December	4·95	12th	1·11 ,,
	41·96		

RAINFALL IN HYETOMETRICAL SEQUENCE.		PERCENTAGE CONTRIBUTED BY EACH MONTH.
February	0·42	1·00
May	0·64	1·52
September	1·59	3·78
June	2·51	6·00
January	3·32	7·91
April	3·34	8·00
November	4·31	10·27
March	4·54	10·81
August	4·61	10·98
December	4·95	11·79
October	5·46	13·00
July	6·27	14·94
		100·00

The following Table shows the Annual Rainfall for the last twenty-three years, giving also the Hyetometrical sequence :—

		IN HYETOMETRICAL SEQUENCE.	
YEAR.	INCHES.	YEAR.	INCHES.
1873	50·82	1887	32·66
1874	55·17	1889	41·28
1875	45·01	1888	41·65
1876	50·23	1895	41·95
1877	68 41	1884	42·03
1878	47·15	1885	44·43
1879	45·93	1875	45·01
1880	46·65	1879	45·93
1881	53·25	1893	46·24
1882	60·55	1880	46·65
1883	51·61	1892	46·78
1884	42·03	1878	47·15
1885	44·43	1890	48·67
1886	51·48	1894	49·78

		In Hyetometrical sequence.	
Year.	Inches.	Year.	Inches.
1887	32·66	1876	50·23
1888	41·65	1873	50·82
1889	41·28	1886	51·48
1890	48·67	1883	51·61
1891	53·62	1881	53·25
1892	46·78	1891	53·62
1893	46·24	1874	55·17
1894	49·78	1882	60·55
1895	41·95	1877	68·41

The average for the years 1873 to 1880 (inclusive) was 51·17 inches; for the following ten years it was 46·76 inches, and for the remaining five years it was 47·67 inches.

The Rainfall for 1895 would require to have 16·6 per cent. of its own volume added to it in order to bring the value up to the local annual average of the end of 1894.

The number of wet days has been only 86 per cent. of the number which occurred in the last named year.

There have been two days, and two only, upon which more than one inch of rain came down in the 24 hours.

In some years there are five or six such days. It will be noticed what a curious derangement there is in the natural sequence of the months when they are placed according to their respective rain values.

May follows February; June follows September; and March follows November, The second half of the year is invariably the wettest, more than 62 per cent. of the total fall came down during the last six months.

Not far short of 20 per cent. of the measurement is due to the twelve wettest days in the year.

The local annual average now stands at 48·93 inches, a very slight variation as compared with the average at the end of each of the last few years.

The mean rainfall for England and Wales was, at the end of 1894, 36·14 inches.

The mean for the British Isles at the end of the same year was 39·18 inches.

The Annual Rainfall for the district is, therefore, more than 12 inches in excess of what obtains for all England and Wales, this excess of moisture must be reckoned as a factor in the causation of some diseases, such as Rheumatism, Respiratory Diseases, and Phthisis; but there is another element which plays a very important part in the causation of these ailments, and that is the geological formation of the district.

In the North of England the aluminous shales of the coal measures yield soils in their properties very like those in Scotland, viz., a boulder clay, and such a stratum is found to run in every direction in this district so that the town is practically built upon a clay soil.

In the first place clay is cold on account of the relatively small amount of heat which it absorbs, taking as a standard 100 which sand with some lime absorbs, clay absorbs 66·7. Again, clay holds a large quantity of water, and is therefore damp as well as cold, and is most unsuitable as a site for building.

Owing to the retentive and non-porous nature of this clay-soil there is no deep filtration and underground storage of water.

The superficial strata become water-logged, and the imprisoned waters are very liable to contamination with surface impurities or with the products of chemical decomposition in the clay itself, and thus give rise to diseases. Then through evaporation from a clay-soil the superincumbent atmosphere is rendered moist and cool, thus lowering the temperature of a place and giving rise to catarrhal affections.

I mention these things to show that there are some diseases which are incidental to the district and in a sense not preventible, but nevertheless for which a great deal can be done to ameliorate them by strictly enforcing the bye-laws in respect to building operations. With these you are familiar, but I may mention that in principle they are the intervention of an impervious floor between the house itself and the soil upon which it is built, and the thorough ventilation of the space between.

POPULATION.

For statistical purposes I have estimated the population of the Borough at the middle of the year at 36,000. This, in my opinion, does not represent the exact number of the population; but I prefer to under—rather than over—estimate the number, as by this means we are not misled by an apparent low death-rate which does not exist.

The difficulty of arriving at a correct estimate has been increased by the removal of a large number of houses under the New Improvement Scheme, without being able to ascertain the whereabouts of the people who occupied them. That they have been dispersed goes without saying, but whether they have gone as lodgers or tenants of other houses is still uncertain.

An interesting feature about the figures of the last census is that at every age the females outnumber the males, except at 1 to 2 years and 5 to 10 years of age.

The late Medical Officer estimated the population at the middle of 1891 at 34,500, and the number of houses at 7,573, this gives an average of 4·5 persons to each house.

The Inspectors have recently got out the number of houses now in the Borough, and according to their returns the number is 8,145, which gives a population of 36,652 upon the same basis as in 1891. However, I trust to have more detailed particulars before making the usual alterations. This uncertainty about a matter of so much importance suggests the advisability of adopting a quinquennial census, as is practised in some Continental countries.

TABLE I.

Ages of Males and Females in the Darwen Sanitary District at the Census of 1891.
REGISTRAR GENERAL'S RETURNS.

Age.	Males.	Females.	Age.	Males.	Females.
Under 1 year	436	449	Under 45 years ...	702	890
1 ,, ...	415	393	50 ,, ...	626	766
2 years ...	377	418	55 ,, ...	443	493
3 ,, ...	363	380	60 ,, ...	286	410
4 ,, ...	358	382	65 ,, ...	184	249
5 ,, ...	1919	1861	70 ,, ...	108	148
10 ,, ...	1892	2012	75 ,, ...	50	69
15 ,, ...	1833	2078	80 ,, ...	19	33
20 ,, ...	1626	1911	85 ,, ...	2	7
25 ,, ...	1433	1618	90 ,, ...		2
30 ,, ...	1162	1330		16025	18167
35 ,, ...	987	1223			
40 ,, ...	894	1045	Total............ 34,192		

BIRTHS.

The number of Births registered during the year was 1,128, viz., 541 males and 587 females. This gives an Annual Birth-rate of 31·3 per 1,000 of the estimated population.

Table II. shows the estimated Population, number of Births, and the Birth-rates for the Darwen Sanitary District since 1882.

The average rate for the last 14 years is 30·5 per 1,000.

TABLE II.

Year.	Estimated Population at the Middle of the Year.	Total Births.	Birth-Rate.
1882	30,295	987	32·2
1883	30,733	1057	34·4
1884	31,360	978	31·9
1885	31,720	1015	32·1
1886	32,185	965	30·0
1887	32,491	1000	30·8
1888	33,500	994	29·6
1889	34,500	978	28·1
1890	36,500	1075	29·4
1891	34,500	1115	32·3
1892	35,000	1057	30·2
1893	35,500	955	26·1
1894	36,000	1039	28·8
1895	36,000	1128	31·3

Notification of Infectious Diseases.

The Darwen Corporation Act 1887, Part VI., Sect. 81, is as follows :—

" 'Infectious Disease' means and includes Smallpox, Typhus, Typhoid, Scarlet, " Relapsing, Continued, and Puerperal Fever, and Diphtheria and such other Diseases as " the Corporation, under the provisions and for the purpose of this Act, may from time to " time declare to be infectious."

On June 21st, 1895, the following Order was issued from the Office of the Town Clerk to all the Medical Men practicing in this Borough :—

"The Health Committee have instructed me to write and inform you with " reference to the Notification of Infectious Diseases that they are advised that under the " designation 'Puerperal Fever' is embraced—those Diseases incidental to the Puerperal " state which involve danger by reason of the possibility of infection from one parturient " woman to another, and any acute disease of the uterus and contiguous organs, " occurring within a week after delivery.

" And consequently that in future you must notify these diseases under the " name of 'Puerperal Fever.' "

The wisdom of this step has been shown in the larger number of cases which have been reported to me under this head, and which would otherwise have escaped supervision by reason of an ill-defined nomenclature. We are thus able to take the necessary steps towards a proper disinfection of infected articles and prevent the spread of this disease, as well as keep a watchful eye over the persons who attend these cases in the character of midwives.

On July 2nd, the following Letter was sent out by the Town Clerk :—

" I am directed by the Town Council to acquaint you that they have made an " Order that for the purposes of the Darwen Corporation Act 1887, the Diseases known " as Membranous Croup and Erysipelas shall be deemed to be Infectious Diseases. " These Diseases must, therefore, be notified to the Medical Officer of Health for the " Borough. The Local Government Board have signified their consent to the Order."

There have been 130 cases of Infectious Disease reported to me during the year, as follows.—

Diphtheria 2, Croup 9, Erysipelas 27, Scarlet Fever 46, Typhoid Fever 36, Relapsing Fever 1, Continued Fever 1, Puerperal Fever 8.

Table III. shows their distribution in numbers in the various Wards of the town. As this does not give an accurate idea of the actual distribution on account of the difference in the population of one Ward with another, I have in Table IV. calculated the rate per 1,000 according to the population at the middle of the year, viz., 36,000.

TABLE III.

WARDS.	Smallpox.	Scarlet Fever.	Diphtheria.	Croup.	FEVERS.					Cholera.	Erysipelas.	Total.
					Typhus.	Typhoid.	Continued.	Relapsing.	Puerperal.			
Central		5		3		3			2		7	20
West-Central.		3				3					1	7
North-East...		18	2	3		14	1	1	3		9	51
North-West...				1		1					4	6
South-East ...		10		1		10			2		4	27
South-West...		10		1		5			1		2	19
		46	2	9		36	1	1	8		27	130

TABLE IV.

Rate per 1,000 per Annum on Population 36,000.

Wards.	Smallpox.	Scarlet Fever.	Diphtheria.	Croup.	FEVERS.					Cholera.	Erysipelas.	Total.
					Typhus.	Typhoid.	Continued.	Relapsing.	Puerperal.			
Central		·78		·46		·46			·31		1·08	3·09
West-Central.		·81				·81					·27	1·89
North-East...		2·16	·24	·36		1·68	·12	·12	·36		1·08	4·12
North-West...				·17		·17					·70	1·04
South-East ...		1·72		·17		1·72			·34		·69	4·64
South-West...		1·62		·16		·81			·16		·32	3·07
Borough ...		1·27	·05	·25		1·00	·02	·02	·22		·75	3·60

Important as the Death-rate of a town is in ascertaining its condition as regards sanitation, &c., its *Sickness Rate* is of greater importance, for thereby we are enabled to take steps to prevent the spread of disease before it has reached its final stage, and secure advantages before it has become too late. By the arrangement in Table IV. I have put before you the condition of the various districts as regards this healthiness.

North-West Ward is, therefore, seen to have had a very good health bill for the past year, Erysipelas having been the most prevalent, followed by Croup and Typhoid Fever. South-East Ward has suffered the most, its Typhoid Fever rate being the highest in the town, and Scarlet Fever being second to North-East Ward; in this district Diphtheria has occurred, and Puerperal Fever prevailed the most.

I have here localised the preventible diseases into districts, and I hope by a careful investigation to be able to still further narrow down the limits of infected areas, and by the information thus acquired lessen the dangers in our midst.

There is no doubt but this information in regard to Typhoid will lead to a fuller knowledge of the sanitary condition of the infected houses and an opportunity of remedying such defects.

In the case of Scarlet Fever and Croup, we may also trace the disease to its starting point, or at least to the centre of dissemination, which is most probably in the Schools.

I may here point out the danger, more particularly in these diseases, of the indescriminate use of slates in schools. I do not think sufficient care is taken to see that each child always uses the same slate; and as the saliva is a most potent factor in the spread of these two diseases, too much care cannot be exercised to prevent this danger.

I have compiled a " Register of Infected Houses," and entered in this book all the cases which have occurred in the Borough during the last five years. On the recurrence of an Infectious Disease in any house this is at once noticed, and the probable cause of such recurrence more quickly ascertained. In fact it forms a life history of every house, and is very useful as a reference.

For the purpose of comparing the Sickness Rate with that of other towns, I have given in Table V. the rate per 1,000 of Infectious cases reported during the last year in 26 towns, and for the sake of greater accuracy these rates have been calculated on the population at the last census.

TABLE V.

TOWNS.	Smallpox.	Scarlet Fever.	Diphtheria.	Croup.	FEVERS.					Cholera.	Erysipelas.
					Typhus.	Typhoid.	Continued.	Relapsing.	Puerperal.		
Liverpool	·23	4·61	·43	·13	·39	2·25	·13	·003	·11	...	2·03
Manchester	·10	4·54	·63	·14	...	·99	...	·003	·05	...	...
Oldham	1·04	1·57	·51	...	...	·88	...	...	·03	...	...
Preston	...	·80	·14	...	...	1·22	...	...	·12	...	·63
Salford	·02	5 80	·87	·19	...	1·96	·05	...	·10	...	·53
Bolton	·08	4·39	·28	...	...	2·13	...	...	06	...	...
Burnley	·17	5·18	1·21	...	...	1·21	...	...	·11	...	·04
Blackburn.........	...	1·90	·19	·04	...	·97	...	...	.	...	...
Bootle	·73	5·95	·38	·18	...	3·75	·05	...	·05	...	·85
St. Helens.........	·12	3·11	·85	·08	...	3·64	·02	...	·22	...	·98
Southport	.02	4·57	·36	·04	...	1·18	...	...	·08	..	·36
Wigan	1·59	2·81	·25	...	·45	1·19	·61	...	·09	...	...
Warrington	...	4·41	·26	...	·01	·81	...	. .	·09	..	·07
Bury	...	2·70	·54	...	...	1·18	·12	...	...	...	...
Ashton-u'd'r-Lyne	·04	5·80	·19	...	...	·93	·46	·02	·14	...	...
Accrington	...	4·19	·80	...	...	2·07	..	..	...	·02	...
Barrow	·07	2·22	·58	·13	...	·39	·28	...	·09	...	1·66
Eccles	·03	7·18	·91	·03	...	1·32	...	...	·13	...	·54
Lancaster	·03	1·83	·29	...	...	·89	...	...	·03	...	...
Widnes	...	19·83	·09	·19	...	1·69	·03	...	·16	·16	·79
Stockport	·02	2·37	·49	·34	...	1·02	·02	...	·09	...	·42
Heywood	. .	14·78	1·17	...	..	1·26	·08	...	·08	...	...
Staleybridge	·07	1·30	·22	·26	...	1·45	·03	...	...	...	·48
Rawtenstall	. .	7·35	1·62	·13	...	·67	...	...	·23	...	·91
Nelson	...	·50	1·01	...	...	·57	...	·22	·08	...	...
Blackpool	·33	5·57	·62	...	..	2·89	...	...	·04	...	...
Darwen............	...	1·37	·05	·26	...	1·08	·02	·02	·23	...	·78

Smallpox has prevailed in 17 of these towns, but fortunately we have in the past year escaped this scourge.

Scarlet Fever.—Twenty-three towns show a higher rate than we do, this disease appears to be the most prevalent of the infectious ones.

Diphtheria.—The whole of the towns mentioned have had a larger number reported, which is a thing we may congratulate ourselves upon.

Croup.—As the order for notifying this disease has only been in operation since last July, these figures must be read accordingly. Had this been reported through the entire year we should have appeared more unfavourably than we now do, as it is we stand pretty high on the list.

Typhus Fever has appeared in three of the towns.

Typhoid Fever.—Sixteen towns show a higher rate than Darwen, so that from a strictly sanitary point of view we hold a favourable position. Still there is room for much improvement, and I hope, as more houses are placed on the waste water closet system, to be able to report a decrease in this rate. In my opinion this disease is disseminated through the medium of the pails in use here, as well as by the careless collecting of soiled articles of clothing and bedding in the same room where food and milk are kept stored. A stricter supervision over this important matter may do much to lessen the risk of the malady spreading, but a more perfect isolation of the persons in the Hospital would do more.

Continued Fever has been notified in twelve towns beside ours, and with the exception of two they show a higher rate. As this disease is no doubt in many cases a mild form of Typhoid, the same remarks as above apply here.

Relapsing Fever.—Darwen shares with four other towns in this disease; a fact for which I am unable to account.

Puerperal Fever.—Since the order in June last was made with the intention of widening the meaning of the Act, we have had a larger number of cases reported. As I am not aware that this is followed out in the other towns, a fair comparison cannot be made.

Erysipelas has appeared more frequently in six of the towns where this disease is notified; including Darwen, there are fifteen out of the twenty-six where this is done.

During last year West Derby was incorporated with Liverpool. As I have not taken this into account in my calculations, the figures for that place are somewhat in excess of the actual facts of the case.

Cases reported in—	1894.	1895.
Smallpox	5	—
Scarlet Fever	127	46
Diphtheria	7	2
Croup	*—	9
Typhus	1	—
Typhoid	41	36
Puerperal Fever	1	8
Erysipelas	*5	27
Continued Fever	—	1
Relapsing Fever	—	1
	187	130

* Not included in the Infectious Diseases.

Compared with 1894 the town has been free from Smallpox, Scarlet Fever, and Diphtheria; but has suffered more from Croup, Puerperal Fever and Erysipelas; and slightly from Typhoid Fever.

TABLE VI.

Population as per Census enumerated.	Estimated Population to Middle of Year.	Births.	Deaths from all Causes.	Deaths under 1 year.	Deaths 1 to 5.	Deaths 5 to 15.	Deaths 15 to 25.	Deaths 25 to 60.	Deaths 60 years and upwards
	1886 32,185	965	641	187	154	28	29	135	108
	1887 32,491	1000	716	188	139	60	35	174	120
	1888 33,500	994	600	154	118	32	33	145	118
1881 29,747	1889 34,500	972	544	149	90	16	31	161	107
	1890 36,500	1075	673	184	68	28	30	196	167
	1891 34,500	415	660	168	115	32	26	193	126
1891 34,192	1892 35,000	1057	641	177	85	35	64	175	105
	1893 35,600	955	677	184	101	40	44	167	141
	1894 36,000	1039	542	130	67	17	46	174	108
	1895 36,000	1128	640	179	92	16	43	186	124

DEATHS.

There were 640 deaths from all causes registered during the year, viz., 321 males and 319 females.

This gives an annual death-rate of 17·7 per 1,000 of the estimated population There were 98 more deaths than in 1894.

TABLE VII.

Shows the diseases and age periods at which the people died.

DISEASES.	Under 1 Year		1 to 5		5 to 15		15 to 25		25 to 35		35 to 45		45 to 60		60 and Up-wards.		Total.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Whooping Cough......	1	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	2
Scarlet Fever..........	...	...	1	1	...	...	..	...	...	. .	...	...	...	..	...	...	1	1
Measles..................	5	8	18	10	...	...	...	...	...	...	...	...	...	...	...	...	23	18
Typhoid Fever.........	...	...	...	...	...	1	3	3	...	...	1	...	1	1	...	...	5	5
Diarrhœa	11	6	1	...	...	...	...	...	...	...	1	1	...	...	...	1	13	8
Syphilis..................	1	...	..	...	...	...	...	...	...	...	...	...	...	...	...	..	1	...
Puerperal Fever	...	. .	...	...	...	...	...	1	...	2	...	2	...	...	...	...	...	5
Pyaemia	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...
Erysipelas...............	...	1	1	...	...	..	...	...	...	..	...	...	...	...	...	...	1	1
Inanition	14	13	...	...	...	...	...	...	...	...	...	...	...	...	...	...	14	13
Phthisis..................	...	...	...	...	...	...	3	8	5	3	5	4	5	1	2	2	20	18
Cancer	...	...	...	...	...	...	...	...	...	1	...	1	1	12	1	3	2	17
Chlorosis	...	...	...	...	1	...	...	...	...	...	. .	...	...	...	...	...	1	...
Rheumatism	...	...	...	...	...	...	...	...	...	...	2	...	1	1	2	1	5	2
Acute Rheumatism ...	...	...	...	...	1	...	...	...	1	...	...	...	...	1	...	...	2	1
Tabes Mesenterica ...	1	...	2	1	...	1	...	...	...	...	...	...	...	...	...	...	3	2
Tubercular Meningitis	2	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	2	2
Tubercular Enteritis...	...	..	...	1	...	...	...	..	...	...	...	...	...	...	...	...	...	1
Tuberculosis	...	...	...	...	...	1	...	...	1	...	...	...	...	...	...	...	1	1
Diabetes	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	1	1
Caries of Ribs	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...
Premature Birth	11	5	...	...	...	...	...	...	...	...	...	...	..	...	...	...	11	5
Atelectasis...............	1	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	2	1
Spina Bifida	...	2	...	...	...	...	...	..	...	...	...	...	...	...	...	..	...	2
Patency of Foramen Ov	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	1
Senile Decay............	...	...	...	...	...	...	...	...	...	...	...	...	...	2	11	15	11	17
Dentition	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	1	1
Bronchitis...............	13	11	6	7	...	...	. .	...	1	...	2	1	11	6	15	11	48	36
Pneumonia	4	5	2	2	1	1	3	1	2	1	...	...	7	1	1	3	20	14
Pleurisy..................	...	...	...	1	...	...	...	...	...	...	1	...	2	...	1	...	4	1
Convulsions	10	7	3	8	...	...	...	...	...	...	...	...	...	...	...	...	13	15
Disseminated Sclerosis	...	...	...	...	...	...	...	...	..	...	...	...	...	1	...	...	...	1
Epilepsy	...	...	...	..	1	...	...	1	...	...	...	...	...	...	1	1	2	2
Meningitis...............	7	...	1	1	2	..	1	1	...	1	...	...	...	...	...	...	11	3
Laryngis mus Stridulus	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	2
Puerperal Ecllampsia..	...	...	...	...	...		...	1	...	...	...	...	...	...	...	...	...	1
Spinal Sclerosis..	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	1	1
Cerebral Sclerosis......	...	...	...	...	. .	...	...	...	..	...	1	...	...	. .	...	...	1	...
Spinal Meningitis	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...
Locomotor Ataxia ...	...	...	...	...	...	...	1	...	...	...	...	...	..	...	...	...	1	...
Heart Disease	...	1	...	...	...	...	...	2	2	1	5	3	7	6	8	7	23	20
Embolism	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	..	2
Atheroma	..	...	..	...	...	...	...	...	...	...	...	...	...	...	...	1	..	1
Phlebitis	...	...	...	...	..	...	...	...	...	...	...	...	1	...	...	...	1	...
Hæmorrhage............	...	...	...	...	...	...	...	...	...	..	...	1	...	...	..	...	...	1

TABLE VII.—(Continued.)

DISEASES.	Under 1 Year		1 to 5		5 to 15		15 to 25		25 to 35		35 to 45		45 to 60		60 and Up-wards.		Total.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Apoplexy	...	...	...	...	..	...	...	1	...	1	...	1	5	5	6	9	11	17
Cystitis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	...	3	...
Bright's Disease	...	...	...	...	...	1	...	2	...	1	1	1	3	3	2	5	6	13
Pyo-nephritis	...	..	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1
Gastro Enteritis	7	8	2	3	...	..	2	...	1	...	...	1	...	...	...	1	12	13
Alcoholic Gastritis	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...
Gastric Ulcer	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...
Intussusception	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...
Colic	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...
Enteritis	7	2	1	...	...	...	...	...	...	...	...	...	...	...	...	...	8	2
Impacted Gall Stone	...	...	...	..	...	...	...	...	...	...	...	...	...	...	...	1	...	1
Congestion of Liver	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...
Hepatitis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1
Suppurating Glands	...	1	...	...		...	...	...	...	...	...	...	...	...	...	...	...	1
Post-part. Hæmorrhage	...	...	...	...	...	...	...	...	...	3	...	...	...	...	...	...	...	3
Confinement	...	...	...	...	...	...	...	3	...	1	...	...	. .	...	...	...	...	4
Plumbism	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..
Injuries	...	...	...	..	1	...	...	...	...	...	...	1	...	1	...	1	1	3
Croup	1	1	5	3	...	1	...	...	...	..	...	...	...	...	...	...	6	5
Congestion of Lungs	1	...	...	1	...	...	...	...	..	...	...	...	1	2	...	...	2	3
Erythema	...	1	..	...	...	...	..	...	...	...	...	...	...	...	..	...	...	1
Pelvic Cellulitis	...	...	...	...	...	...	...	2	...	2	...	...	...	...	...	...	...	4
Tumour of Uterus	...	...	...	..	..	...	...	...	...	...	...	...	...	1	...	...	...	1
Peritonitis	...	...	...	...	...	...	1	...	1	...	...	1	...	...	...	...	2	1
Congestion of Brain	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...
Pelvic Abcess	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	..	1
Ovarian Tumour	...	...	...	...	...	...	...	..	...	...	...	...	...	...	...	2	...	2
Abcess	1	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1	1
Cellulitis	..	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1
Emphyseme	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1	...
Inquests	...	1	2	2	1	...	2	1	1	...	4	2	6	1	...	2	16	9
	101	78	47	45	10	6	16	27	15	18	24	21	55	53	53	71	321	319
	179		92		16		43		33		45		108		124		640	

Infantile Mortality.—The number of children who died during the first twelve months of life was 179. During the last ten years this number has been exceeded on four occasions, viz., in 1886, 1887, 1890, and 1893.

Table VIII. gives the number of these deaths and their causes.

TABLE VIII.

Deaths of Infants (under 1 year).

	Males.	Females.	Total.
Zymotic Diseases	17	16	33
Diatetic ,,	14	13	27
Constitutional Diseases..	5	—	5
Developmental ,, ..	13	9	22
Septic Diseases	—	1	1
Respiratory Diseases	17	16	33
Local Diseases—			
Nervous System	17	8	25
Circulatory	—	1	1
Digestive	15	10	25
Lymphatic	—	1	1
Other Causes	3	3	6
	101	78	179

Inanition, which is an ill-defined cause of death, was responsible for 27 fatal cases. How far the employment of women away from their homes during the nursing period is responsible for this, it is impossible to say. The withdrawal of the natural food of the infants, and the substitution of hand feeding at such a time is undoubtedly a great factor. This matter is of so much importance that every mother should thoroughly understand that it is not only undesirable but unsafe to give a child anything but a milk diet before dentition is almost completed. Should her own milk fail, or from other circumstances she is unable to nurse the baby, the best substitute is cows' milk, boiled and carefully mixed with a proper proportion of water. The many patent preparations which are in the market, and which are so much extolled for the use of infants, are far inferior to either mother's milk or good cow's milk. When using cow's milk the addition of a small quantity of lime-water to neutralise the acidity will be found advantageous. Regularity of feeding is a most important matter often overlooked by those in charge of children. This, with the thorough cleansing of the feeding-bottles, and a preference for those without rubber-tubing, will do much to lessen the number of deaths from this cause.

Premature Birth caused sixteen deaths, and for these the employment of woman in mills almost up to the time of their confinement must to a large extent be responsible.

ZYMOTIC DISEASES.

Diarrhœa resulted in seventeen deaths. This is so closely associated with Diatetics that the above remarks re this must suffice. But beyond this the climatic conditions no doubt play an important part. On examining the records I find that Diarrhœa practically commenced in June and reached its maximum in October. When we remember that September was the hottest month of the year, what I have mentioned to you in Committee will be brought to your minds, viz., that with the increase of the earth's temperature up to 56° at a depth of 4 feet, Diarrhœa becomes much more prevalent, the reason for its seasonal incidence is evident. I cannot suggest any remedy for this further than the issuing of instructions to all householders for the need of great care in preserving all kinds of food from contact with soiled clothing, especially at the time when this disease becomes imminent as is shown by a register of the earth's temperature.

TABLE IX.

SCHOOL ATTENDANCE RETURNS. NOV. 20TH, 1895.

SCHOOL.	No. on School Register.	Measles.	Mumps.	Absent from other Causes.	Total Absent.	Percentage Absent.
No. 1 District.						
St. Paul's, Hoddlesden	255	...	...	14	14	5·4
Sandhills	166	...	...	6	6	3·6
Culvert	435	34	...	32	66	15·1
Bolton Road	600	40	...	38	78	13·0
St. John's	394	...	5	41	46	11·6
Highfield	343	14	3	17	34	9·9
Vernon Street	180	20	...	35	55	30·5
St. James'	400	...	...	40	40	10·0
Lower Chapel	350	13	9	28	50	14·2
	3123	121	17	251	389	12·4
No. 2 District.						
St. William's	520	29	10	61	100	19·2
Belgrave	400	8	1	52	67	16·7
Holy Trinity	435	5	17	23	45	10·3
	1355	42	28	136	212	15·4
No. 3 District.						
Duckworth Street	504	6	4	13	23	4·5
St. George's	373	12	1	10	23	6·1
St. Cuthbert's	453	2	...	8	10	2·2
Hollins Grove	189	1	...	9	10	5·2
St. Edward's	268	1	1	5	7	2·6
Earcroft	240	1	...	7	8	3·3
Blacksnape	96	...	2	8	10	9·6
	2123	23	8	60	91	4·8
Total	6601	186	53	447	692	32·6

Measles accounted for thirteen deaths of infants, and twenty-eight of children between the ages of one and five years, making a total of forty-one ; being at the rate of 1·1 per 1,000 of the whole population. It was owing to the prevalence of this disease that on June 7th, at a Special Meeting of the Health Committee convened to consider this matter, an order was passed Closing all the Schools in the Borough for a period of three weeks. On the re-opening of the Schools the School Board Officer reported to me that the attendance at all the places was very good, with the exception of Lower Chapel School, where they had seventeen children absent still suffering from Measles. These seventeen represented twelve families. From the position of this School it is very likely that many of the scholars are drawn from a wider area and more rural district ; the progress of the disease had been necessarily much slower. This School is situated in North-East Ward, and a short time before this the Managers of St. James' School, in the immediate vicinity, had voluntarily closed their place on account of the prevalence of Measles.

Again on November 14th I reported to this Committee that there were absent from the Blackburn Road Wesleyan School 94 from the Infant and 28 from the Mixed Department, making a total of 122 out of an average attendance of 304. From the Wesleyan Central Schools in Belgrave Square there were reported absent a total of 56, out of an average attendance of 262. Of these, however, only four were said to be suffering from Measles and four from Mumps. These two schools were, therefore, ordered to be closed for three weeks from date. In spite of this, Measles continued to spread so rapidly that on the 21st November the report as given on Table IX. was presented by me to the Health Committee, and all the Schools in the Borough were again closed for a period of three weeks. The order closing the two schools on the 14th inst. to date from the same time, viz., the 21st inst. As this closure involved the Christmas Holidays somewhat closely, the whole of the schools remained closed until the New Year, re-opening after an interval of about six weeks on January 6th, 1896. The School Board Inspector (Mr. Bretherick) caused a most exhaustive enquiry to be made at each school, and reported to me that the attendance at every place was exceptionally good, there being only about 20 absent through Measles from all the schools in the town.

I cannot say what proportion of children die out of those attacked, but the disease *per se* is not a fatal one, death being the result of some complication. I think I am safe in saying that for every death there would be a dozen suffering, therefore, there must have been about 500 cases in the town, and that of itself is a sufficient reason for taking the active steps that you did.

Another instructive item is, that ALL the deaths took place among children under the school age, viz., 5 years. Although many parents send their children to school sooner than the law compels them to do, we may safely assume that the majority of the children attending school who had the disease recovered, and so far that is satisfactory ; but it is evident that they contracted the disease in the schools, and took it to their homes, infecting the younger ones there, who have formed the principal sufferers, in that they alone appear in the death roll.

The largest number of deaths took place in December, thus following the usual seasonal curve which reaches its maximum in that month.

SCARLET FEVER accounted for two deaths, and WHOOPING COUGH for three.

TUBERCULAR DISEASES, apart from Phthisis, resulted in ten deaths, which may point to the milk supply as a cause, and which I shall deal with in my remarks on the conditions of the farms in the district.

CONVULSIONS.—From this cause there were twenty-eight deaths. This is usually ascribed to the effects of Dentition, but should more correctly be put down to injudicious feeding. Hence the still greater need for more care in this particular matter, as is shown in the number of fatal cases from GASTRO-ENTERITIS AND ENTERITIS, which show a death-roll of thirty among children under five years of age.

TYPHOID FEVER.—There were 36 cases and 10 deaths. There are very great difficulties in the way of ascertaining the manner in which this disease is spread. In one house there were three cases, one of these had been employed before her illness in cleaning the closets used by females at a mill. She was nursed by a female relative who lived in another part of the town, and who also sufferred from the disease. From another house three children were removed to the Hospital suffering from Typhoid. The mother had died a little while before, the cause of death being returned as Diarrhœa. Such cases as these point to the danger of infection by means of soiled clothing being carelessly allowed to lie about where articles of food are stored, and which I am sorry to say is a not uncommon proceeding in the earlier stage of the disease before a thorough diagnosis has been made. Where all such suspicious cases occur great care should be exercised in the supervision of both food and clothing.

Another danger lies in the use of pails, whereby the disease may be spread to all who use them, unless these objectionable articles are carefully cleansed and disinfected. Strict orders are issued to the men employed that all pails must be returned to the same closets from which they are taken, so as to minimise this risk as much as possible. The gradual abolition of this system and the substitution of waste water closets, which is in operation, will, when completed, do much to stamp out this disease.

PUERPERAL FEVER.—Since July there have been 8 cases reported, and during the year there have been 5 deaths. As the order giving an extended definition to "Puerperal Fever" has only been in operation since July, it is only fair to assume that had this been the case for a longer period the number would have been larger. The above particulars, however, demonstrate very forcibly the gravity of this disease; and of its infectiousness there is no doubt. The need for a perfect supervision and complete disinfection of all articles which have been soiled by discharges is very evident. This matter is a very difficult one to carry out unless the issue of every case is at once made known to me, and for this the co-operation of all the other medical men in the town was invited by a letter sent out by the Town Clerk on September 27th, 1895, as follows :—

"I am directed by the Health Committee to acquaint you that from statistics "supplied to them they regret to observe that cases of Puerperal Fever are apparently on "the increase in the Borough. They have, therefore, instructed me to invite the "co-operation of yourself and the other medical men in taking every precaution to prevent "the spread of this disease."

I hope we shall have an appreciable reduction in the number of such cases in the near future. The method which I would recommend would be for each medical man to report to me the conclusion of each, either by recovery or death, so that everything which had been in contact with the patient could then be thoroughly disinfected.

The Diseases of the Respiratory Organs, viz., Bronchitis, Pneumonia, and Pleurisy have been very fatal during the year, the following deaths having occurred. Bronchitis 84, Pneumonia 34, Pleurisy 5, making a total of 123, at the rate of 3·4 per 1,000 What effect the geological formation of the district has on these diseases I cannot say; most likely it has some influence. In connection with this matter the result of occupation naturally suggests itself, and I have got out the deaths for the last five years to compare them, and to try to find some reason for this heavy mortality. I have found a very serious obstacle in the way of a complete investigation, from the absence of information as to the occupation followed by the deceased persons which appears in the returns of the Registrar. In the future this difficulty will be overcome, as the Local Registrar has promised to supplement his returns with these particulars.

For the sake of analysis I have divided the age periods into six. The 1st of Infants; 2nd, that of Young Children; 3rd, the School Children up to half-time; 4th, when they have begun to work; 5th, the period in which they are full time, and during which they are likely to be at work; 6th, Old People who are not likely to be following any regular occupation.

TABLE X.—BRONCHITIS.

Deaths at different age periods for the last five years :—

	Under 1 Year.	1 to 5.	5 to 10.	10 to 15.	15 to 60.	60 and Upwards	Total.
1891......	30	14	2	...	18	40	104
1892......	29	19	...	...	27	30	105
1893......	41	24	3	...	12	29	109
1894......	27	20	...	...	7	17	71
1895......	24	13	...	...	21	26	84
	151	90	5	...	85	142	473

In the case of BRONCHITIS the extremes of life are the chief sufferers, followed by the young children, which puts out of court the influence of occupation entirely. And strangely from 5 to 10 years of age only contributes 5 deaths; whilst from 10 to 15 years there have been no deaths during the last five years; from 15 to 60 years of age there have been 85 deaths. These have varied considerably from one year to another, with this comfort that they have not appreciably increased in number. It, therefore, seems to me that so far as this disease is concerned, whatever faults the steaming in our mills may have, we cannot with any show of reason lay an increasing death-rate from Bronchitis at its door. It is gratifying to learn that the total number of deaths has become less during the last two years, and this with an increasing population.

TABLE XI.—PNEUMONIA.

Deaths at different age periods for the last five years :—

	Under 1 Year.	1 to 5.	5 to 10.	10 to 15.	15 to 60.	60 and Upwards	TOTAL.
1891......	6	15	4	1	44	5	75
1892......	8	5	...	2	25	9	49
1893......	8	8	1	1	24	8	50
1894......	5	4	1	...	19	4	33
1895......	9	4	1	1	15	4	34
	36	36	7	5	127	30	241

PNEUMONIA.—Here we meet with a different state of things; the most fatal ages are those in which the sufferers are actively engaged in work, and we have a disease which most persistently attacks and proves fatal to the wage-earning portion of the population. This is an important matter and points to the necessity of acquainting the public with some details of this malady. It is not generally understood to be an infectious disease, but the fact that it is due to a micro-organism is now established, and the information thus gained should be a weapon against it. The germ is spread through the medium of the air, and by the discharges from the mouth and nose. Therefore, perfect ventilation of both workshops and sick-rooms is essential, and the prompt burning of all cloths which have come in contact with these discharges should be insisted upon.

The number of deaths at the working ages, as well as the total number has decreased during the last two years, a most gratifying thing for me to record. There is no doubt that the more efficient supervision, along with the better ventilation of the weaving sheds, is having a beneficial effect; and it is likely that we shall see still better results follow.

TABLE XII.

Showing the Deaths from Consumption at the same age periods for the last five years:—

	Under 1 Year.	1 to 5.	5 to 10.	10 to 15.	15 to 60.	60 and Upwards	TOTAL.
1891......	...	...	...	...	20	3	23
1892......	...	...	1	2	33	1	37
1893......	...	...	...	...	35	4	39
1894......	...	1	1	1	42	...	45
1895......	...	...	...	...	34	4	38
	...	1	2	3	164	12	182

CONSUMPTION.—The most fatal ages are from 15 to 60, and these also represent the wage-earning periods of life; the highest point was reached in 1894. As this disease is usually of a chronic course, and also infectious from one to another by the breath and from the liberation of the tubercle bacilli or germ, from the dried sputum, it is very important to see that there is great danger from persons who are suffering from this disease sleeping with others who may be healthy. The improved ventilation of sleeping apartments and workshops, and the isolation of the persons who have the disease, will do much to limit the ravages of this fatal complaint.

TABLE XIII.

Estimated Population, number of Deaths and Death-rates from all causes, and from Zymotic Diseases, of Children under one year, and of persons aged 60 years and upwards, during the last eleven years.

YEAR.	Estimated Population at the Middle of the year.	Total Deaths from all causes.	Death-rate per 1,000 of population.	Total Deaths from seven principal Zymotic Diseases.	Death-rate from Zymotic Diseases per 1,000 of population.	Total Deaths under 1 year old	Percentage of Deaths under one year to Total Deaths.	Total Deaths of persons aged 60 years and upwards	Percentage of Deaths of aged persons to total Deaths.
1885	31,720	489	15·4	25	0·78	129	26·3	103	21·0
1886	32,185	641	19·9	109	3·3	187	29·2	108	16·8
1887	32,491	716	22·0	99	3·0	188	26·3	120	16·7
1888	33,500	600	17·9	55	1·9	154	25·6	145	24·1
1889	34,500	554	16·0	70	2·0	149	26·8	107	19·3
1890	36,500	673	18·4	44	1·2	184	27·3	167	24·8
1891	34,192	660	19·1	60	1·7	168	25·4	126	19·0
1892	35,000	641	18·3	67	1·9	177	27·6	105	16·3
1893	35,500	677	19·0	79	2·2	184	27·1	141	20·8
1894	36,000	542	15·0	40	1·1	130	23·9	107	19·7
1895	36,000	640	17·7	77	2·1	179	27·9	124	19·3

TABLE XIV.

Deaths during the eleven years, 1885, 1886, 1887, 1888, 1889, 1890, 1891, 1892, 1893, 1894, and 1895, in the Borough of Darwen, under five years of age, and five years and upwards.

	UNDER 5 YEARS OF AGE.											5 YEARS AND UPWARDS.										
	1885	1886	1887	1888	1889	1890	1891	1892	1893	1894	1895	1885	1886	1887	1888	1889	1890	1891	1892	1893	1894	1895
Smallpox	...	...	...	...	...	...	...	...	...	...	...	...	1	...	2	...	...	...	1	...	1	..
Measles	2	63	5	29	6	...	21	.	25	...	41	...	3	1	2	...	...	3	...	2	...	...
Scarlet Fever	2	2	22	8	4	4	2	13	7	2	2	1	...	11	2	1	2	2	5	3	2	...
Diphtheria	...	2	3	...	1	1	1	...	4	2	...	1	4	4	...	...	1	...	...	1	...	...
Whooping Cough	4	4	13	2	28	5	2	26	2	17	3	...	...	..	...	1	...	...	1	...	...	...
Croup	4	15	9	13	4	12	17	17	13	1	10	6	2	8	5	1	1	3	4	10	2	1
CONTINUED FEVERS. Typhus	...	...	...	...	...	...	...	...	...	1	...	...	..	2	1	1	...	...	...	...	...	...
Typhoid	...	1	1	...	...	1	2	2	...	...	..	4	3	10	8	4	4	10	8	7	9	10
Others	...	.	..	..	...	...	2	1	...	...	...	1	...	. .	...	...	...	...	...	...	...	...
Diarrhœa and Dysentry	8	22	21	5	2	24	10	5	20	6	18	2	4	6	1	19	2	2	3	7	...	3
Cholera	...	...	...	...	...	...	...	...	...	...	...	...	..	...	1	...	.	1	...	...	..	...
Rheumatic Fever	...	...	...	...	...	...	...	...	...	...	...	5	5	5	...	...	1	...	1	...	...	3
Erysipelas	...	...	...	3	...	...	...	1	1	. .	2	1	1	...	3	3	..	2	1	...	1	...
Pyæmia	...	...	...	...	...	...	...	. .	...	..	...	1	...	...	...	...	...	...	...	...	...	1
Puerperal Fever	..	...	...	. .	...	...	...	...	...	...	...	1	4	1	1	...	...	...	...	1	3	5
Ague	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...
Phthisis	...	1	2	...	1	1	...	...	1	...	...	36	39	41	40	33	31	22	40	44	44	38
Bronchitis, Pneumonia and Pleurisy	61	75	72	74	46	66	68	63	84	49	51	63	78	91	87	72	158	119	93	82	52	72
Heart Disease	...	...	2	1	4	2	1	...	...	..	1	22	26	34	32	46	38	27	35	57	47	43
Injuries	1	2	6	2	1	4	4	3	1	...	5	9	9	13	9	11	10	15	15	13	5	20
All other Diseases	126	145	171	133	125	144	153	133	126	118	138	128	129	162	136	140	171	171	170	166	180	163

TABLE XV.

Lancashire Large Towns.

	General Death-rate.	Zymotic Death-rate.
MANCHESTER	24·5	3·8
SALFORD	25·5	5·2
LIVERPOOL	28·8	4·0
OLDHAM	21·9	2·7
BLACKBURN	24·3	5·6
PRESTON	23·9	3·8
BOLTON	23·9	4·0
BURNLEY	24·0	1·2

Lancashire Smaller Towns.

BOOTLE	21·5	3·5
ST. HELENS	21·0	3·1
SOUTHPORT	17·3	0·9
WIGAN	18·2	3·2
WARRINGTON	21·5	5·3
BURY	—	—
ASHTON-UNDER-LYNE	23·0	3·3
ROCHDALE	—	—
ACCRINGTON	17·8	2·6
BARROW-IN-FURNESS	—	—
ECCLES	15·2	3·1
LANCASTER	20·9	1·3
LEIGH	26·5	7·4
WIDNES	22·9	4·1
DARWEN	**17·7**	**2·1**

Table XV. shows by comparison the death-rates, general and Zymotic, of other towns in Lancashire.

In most cases this comparison is a useful one, as the manufactures and mode of living are identical; but in others, owing to the age and sex distribution being different, a correct comparison cannot be drawn unless the correction for the above is made.

This applies more especially to such towns as Southport and Eccles, which, strange to say, are the only towns with a lower death-rate than Darwen. This, no doubt, is chiefly owing to the larger number of persons living at these places who are naturally healthy, and at a healthy age, such as compose the servant class. Besides this the influence of occupation in mills is not felt.

TABLE XVI.

ANALYSIS of the Vital and Mortal Statistics of Thirty-three of the Largest English Towns during the Year 1895.

TOWNS.	Estimated Population middle of 1895.	Births.	Deaths.	Annual Rate per 1,000 Living.			Deaths from Principal Zymotic Diseases.	Smallpox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping Cough.	Fever.	Diarrhœa.	Deaths of Children under 1 Year of Age to 1,000 Births.	Rate per cent. of Uncertified Deaths.
				Births.	Deaths.	Principal Zymotic Diseases.										
London	4,392,346	133,715	86,937	30·5	19·8	2·6	11,544	55	2,632	829	2,316	1,483	629	3,600	166	0·7
West Ham	249,473	8,541	4,447	34·3	17·9	3·2	805	10	227	45	192	57	65	209	168	2·4
Croydon	114,923	2,896	1,658	25·3	14·4	1·3	151	..	19	4	22	28	14	64	134	..
Brighton	119,604	3,057	2,252	25·6	18·9	1·8	209	..	26	5	18	42	14	104	164	1·6
Portsmouth	174,751	4,868	3,108	27·9	17·8	2·1	371	..	39	7	19	63	35	208	175	0·8
Plymouth	89,096	2,551	1,787	28·7	20·1	1·9	171	..	77	2	10	28	7	47	178	0·3
Bristol	228,139	6,579	4,109	28·9	18·1	1·3	295	..	8	16	34	45	21	171	143	1·1
Cardiff	155,637	5,321	2,826	34·3	18·2	2·4	377	..	47	8	56	52	15	199	179	1·0
Swansea	97,008	3,231	1,767	33·4	18·3	1·7	163	..	46	5	12	20	20	60	178	1·1
Wolverhampton	85,780	3,027	2,086	35·4	24·4	4·2	362	..	41	33	84	53	17	134	218	0·6
Birmingham	496,751	16,026	10,048	32·4	20·3	2·7	1,321	8	136	127	183	171	81	615	183	4·8
Norwich	107,127	3,398	2,066	31·8	19·3	2·7	291	..	27	10	19	53	26	156	190	1·6
Leicester	193,839	5,954	3,333	30·8	17·2	3·0	577	..	32	16	35	85	39	370	203	3·1
Nottingham	226,658	6,718	4,299	29·7	19·0	2·2	505	..	1	51	10	31	54	358	190	1·3
Derby	100,272	2,909	1,670	29·1	16·7	2·0	195	8	7	8	6	21	18	127	161	0·5
Birkenhead	107,469	3,288	2,093	30·7	19·5	2·4	252	..	3	16	45	41	42	105	174	1·1
Liverpool	503,967	18,525	14,469	36·9	28·8	4·0	2,016	13	359	144	120	372	187	821	210	3·0
Bolton	119,337	3,921	2,852	32·9	24·0	4·5	530	1	124	23	16	67	53	246	212	0·3
Manchester	524,865	17,624	13,205	33·7	25·2	3·7	1,950	2	509	169	108	250	99	813	203	1·2
Salford	208,253	7,454	5,327	35·9	25·6	5·0	1,031	..	213	97	62	133	88	438	231	2·3
Oldham	141,079	3,873	3,091	27·5	22·0	2·8	393	22	98	15	26	54	26	152	190	3·2
Burnley	99,591	3,189	2,322	32·1	24·0	1·2	385	..	25	22	43	54	30	211	242	1·9
Blackburn	127,615	3,899	3,093	30·6	24·3	5·6	716	..	323	8	9	75	29	272	236	2·8
Preston	112,638	3,753	2,684	33·4	23·9	3·8	423	1	47	4	8	50	22	291	248	3·6
Huddersfield	99,482	2,150	1,675	21·7	16·9	1·2	119	..	12	19	15	20	6	47	158	3·3
Halifax	93,813	2,193	1,805	23·4	19·3	1·3	122	..	9	5	14	23	16	55	158	2·0
Bradford	226,384	5,890	4,482	26·1	19·9	2·5	566	..	18	25	20	106	40	357	203	1·0
Leeds	395,546	12,479	8,083	31·6	20·5	2·7	1,062	..	134	51	65	112	82	618	191	0·6
Sheffield	342,768	11,913	6,994	34·9	20·5	3·2	1,085	..	187	33	52	71	97	645	197	3·1
Hull	216,722	7,392	4,504	34·2	20·8	3·3	718	..	19	39	37	44	48	531	205	4·0
Sunderland	137,705	4,819	2,992	35·1	21·8	3·5	481	..	9	11	8	63	132	258	189	1·2
Gateshead	95,871	3,306	1,872	34·6	19·6	2·6	251	..	28	14	19	62	15	113	186	0·8
Newcastle-on-Tyne ..	207,021	6,437	4,229	31·2	20·5	2·5	520	..	141	22	52	59	48	198	186	1·1
DARWEN	**36,000**	**1,128**	**640**	**31·3**	**17·7**	**2·1**	**77**	..	**41**	**2**	..	**3**	**10**	**21**	**158**	**1·5**
33 Towns	10,591,530	330,896	218,165	31·3	20·7	2·8	29,957	120	5,623	1,883	3,735	3,888	2,115	12,593	182	1·5
32 Provincial Towns ..	6,199,184	197,181	131,228	31·9	21·2	3·0	18,413	65	2,991	1,054	1,419	2,405	1,486	8,993	193	2·2

GOVERNMENT FORM A.

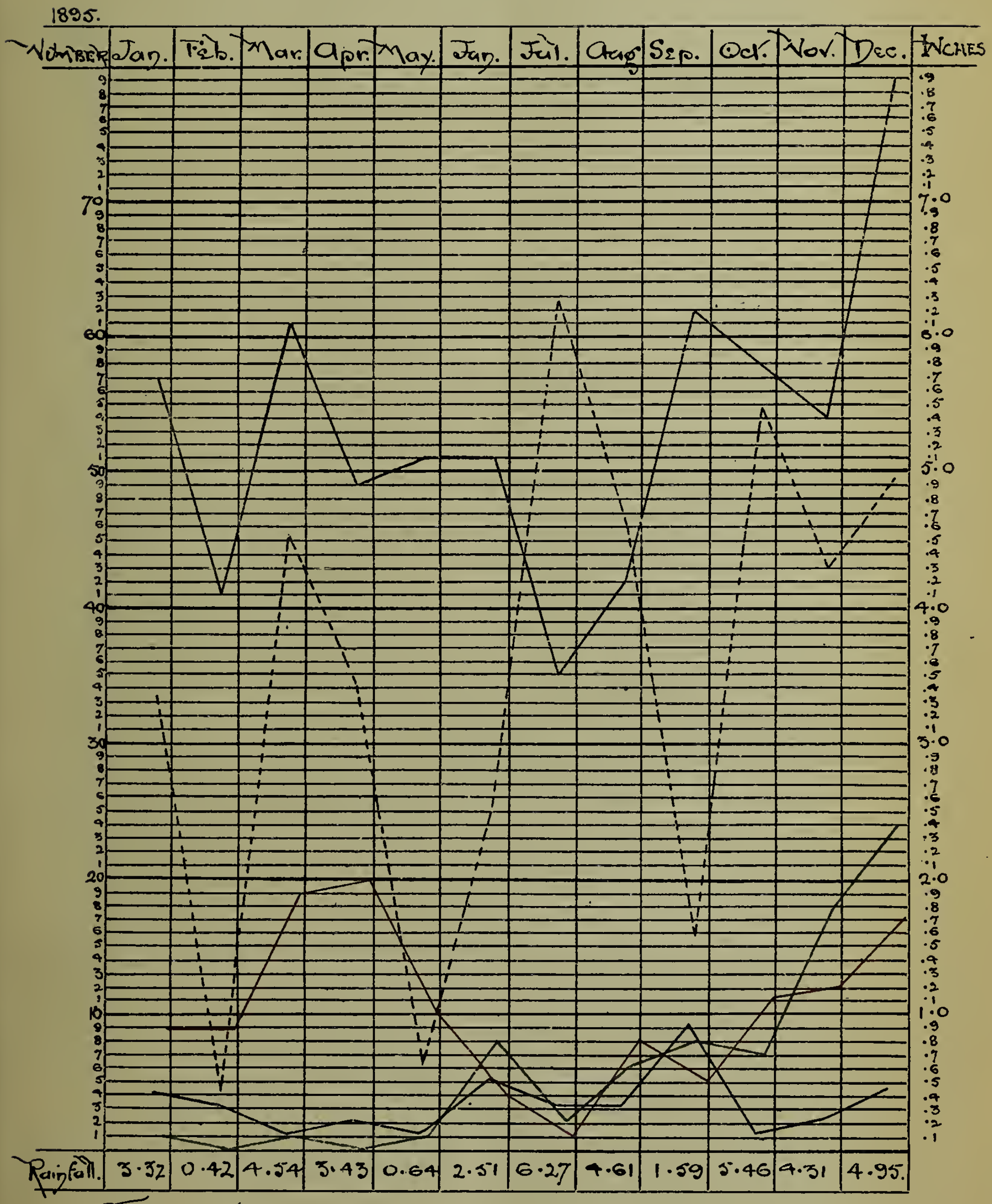
TABLE OF DEATHS during the Year 1895, in the Darwen Urban Sanitary District, Classified according to Diseases, Ages, and Localities.

NAMES OF LOCALITIES adopted for the purpose of these Statistics; public institutions being shown as separate localities. (*Columns for Population and Births are in Table B.*) (*a*) Wards.	MORTALITY FROM ALL CAUSES AT SUBJOINED AGES. At all Ages. (*b*)	Under 1 Year. (*c*)	1 and under 5. (*d*)	5 and under 15. (*e*)	15 and under 25. (*f*)	25 and under 65. (*g*)	65 and upwards. (*h*)	(*i*)	MORTALITY FROM SUBJOINED CAUSES, DISTINGUISHING DEATHS OF CHILDREN UNDER FIVE YEARS OF AGE. Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.	FEVERS. Typhus.	Enteric or Typhoid	Continued.	Relapsing.	Puerperal.	Cholera.	Erysipelas.	Measles.	Whooping Cough.	Diarrhœa and Dysentery.	Rheumatic Fever	Phthisis.	Bronchitis, Pneumonia, and Pleurisy.	Heart Disease.	Injuries.	All Other Diseases.	TOTAL.
Central	109	34	18	2	3	33	19	Under 5.	..	..	..	4	..	..	..	..	..	..	..	5	2	3	..	..	8	..	..	30	52
								5 upwds.	..	..	..	...	..	..	..	..	1	..	..	..	..	..	1	9	8	5	..	33	57
West-Central	64	20	10	..	2	21	11	Under 5.	..	..	...	...	..	..	..	..	..	..	..	3	..	3	..	..	3	..	..	21	30
								5 upwds.	..	..	..	..	..	1	..	...	..	..	..	..	..	..		1	9	5	..	18	34
North-East	173	57	18	4	14	52	28	Under 5.	..	..	..	2	..	..	..	..	..	..	1	9	..	6	..	..	16	..	..	41	75
								5 upwds.	..	..	..	..	..	2	..	..	1	..	..	..	..	1	1	13	15	13	..	52	98
North-West	70	20	4	4	5	19	18	Under 5.	..	..	..	1	..	..	..	..	..	..	1	1	..	2	..	..	6	..	..	13	24
								5 upwds.	..	..	..	1	..	..	..	..	..	...	..	..	..	..	1	7	12	5	..	20	46
South-East	102	18	18	4	10	30	22	Under 5.	..	..	..	1	..	..	..	..	..	..	..	5	..	3	..	..	6	..	..	21	36
								5 upwds	..	..	..	..	..	4	..	..	3	..	..	..	..	..	..	5	14	6	..	35	66
South-West	122	30	24	2	9	31	26	Under 5.	..	2	..	2	..	..	..	..	..	..	..	18	1	1	..	..	11	1	..	18	54
								5 upwds.	..	..	..	..	..	3	..	...	..	..	..	..	..	..	..	3	13	9	..	39	68
TOTALS	640	179	92	16	45	186	124	Under 5.	..	2	..	10	..	..	..	..	..	..	2	41	3	18	..	..	50	1	..	144	271
								5 upwds.	..	..	..	1	..	10	..	..	5	..	..	..	..	1	3	38	71	43	..	197	369
																													640

GOVERNMENT FORM B.

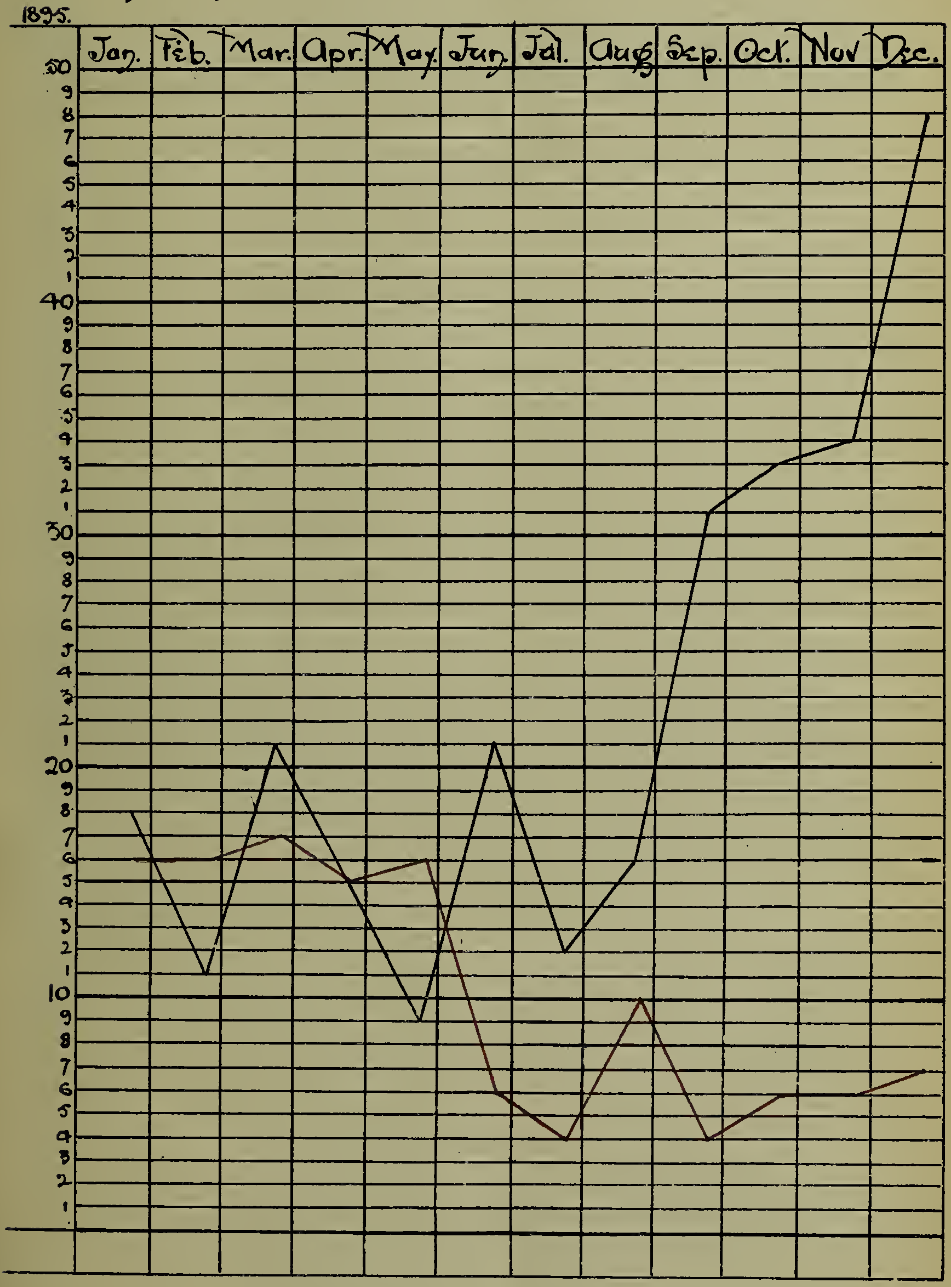
TABLE OF POPULATION, BIRTHS, AND OF NEW CASES OF INFECTIOUS SICKNESS, coming to the knowledge of the Medical Officer of Health, during the Year 1895, in the Darwen Urban Sanitary District; classified according to Diseases, Ages, and Localities.

Names of Localities adopted for the purpose of these Statistics; Public Institutions being shown as separate Localities.	Population at All Ages.		Registered Births.	New Cases of Sickness in each Locality, coming to the Knowledge of the Medical Officer of Health.											Number of such Cases Removed from their Homes in the several Localities for Treatment in Isolation Hospital.										
								Fevers.											Fevers.						
(a) Wards.	Census 1891. (b)	Estimated to middle of 1895. (c)	(d)	Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.	Typhus.	Enteric or Typhoid.	Continued.	Relapsing.	Puerperal.	Cholera.	Erysipelas.	Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.	Typhus.	Enteric or Typhoid.	Continued.	Relapsing.	Puerperal.	Cholera.	Erysipelas.
Central	6,222	6,412	....	....	5	....	3	....	3	....	....	2	....	7	....	....	....	....	....	....	....	....	....	....	....
West-Central	3,801	3,679	....	....	3	....	....	....	3	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....
North-East	7,530	8,307	....	....	18	2	3	....	14	1	1	3	....	9	....	....	....	....	....	3	....	....	....	....	....
North-West	4,864	5,673	....	....	....	....	1	....	1	....	....	....	....	4	....	....	....	....	....	....	....	....	....	....	....
South-East	5,769	5,777	....	....	10	....	1	....	10	....	....	2	....	4	....	....	....	....	....	1	....	....	....	....	....
South-West	6,006	6,152	....	....	10	....	1	....	5	....	....	1	....	2	....	....	....	....	....	....	....	....	....	....	....
Totals	34,192	36,000	1,128	....	46	2	9	....	36	1	1	8	....	27	....	....	....	....	....	4	....	....	....	....	....



Total Number of Deaths .... marked in "Black."
" " " " from Bronchitis, Pneumonia, & Pleurisy " " "Red."
" " " " " Consumption .... " "Blue."
" " " " " Zymotic Diseases .... " "Green."
The Dotted Lines shew the "Rainfall" in inches and tenths.

TOTAL DEATHS of Children under "five" and Persons over sixty.

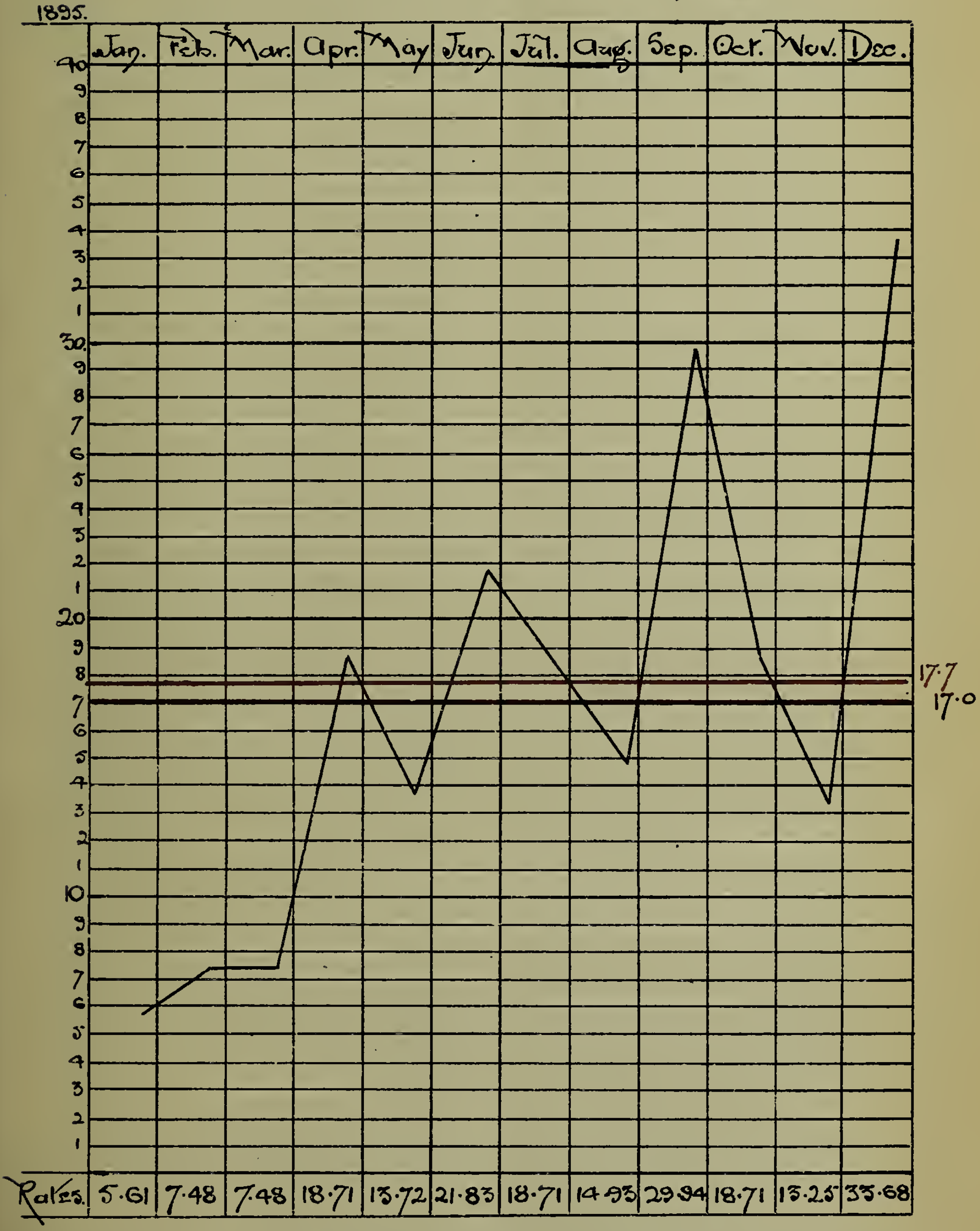


Children under 5 years marked in "Black" —

Persons 60 and upwards " " "Red" —

CENTRAL WARD.

Death Rate per 1000, per annum.

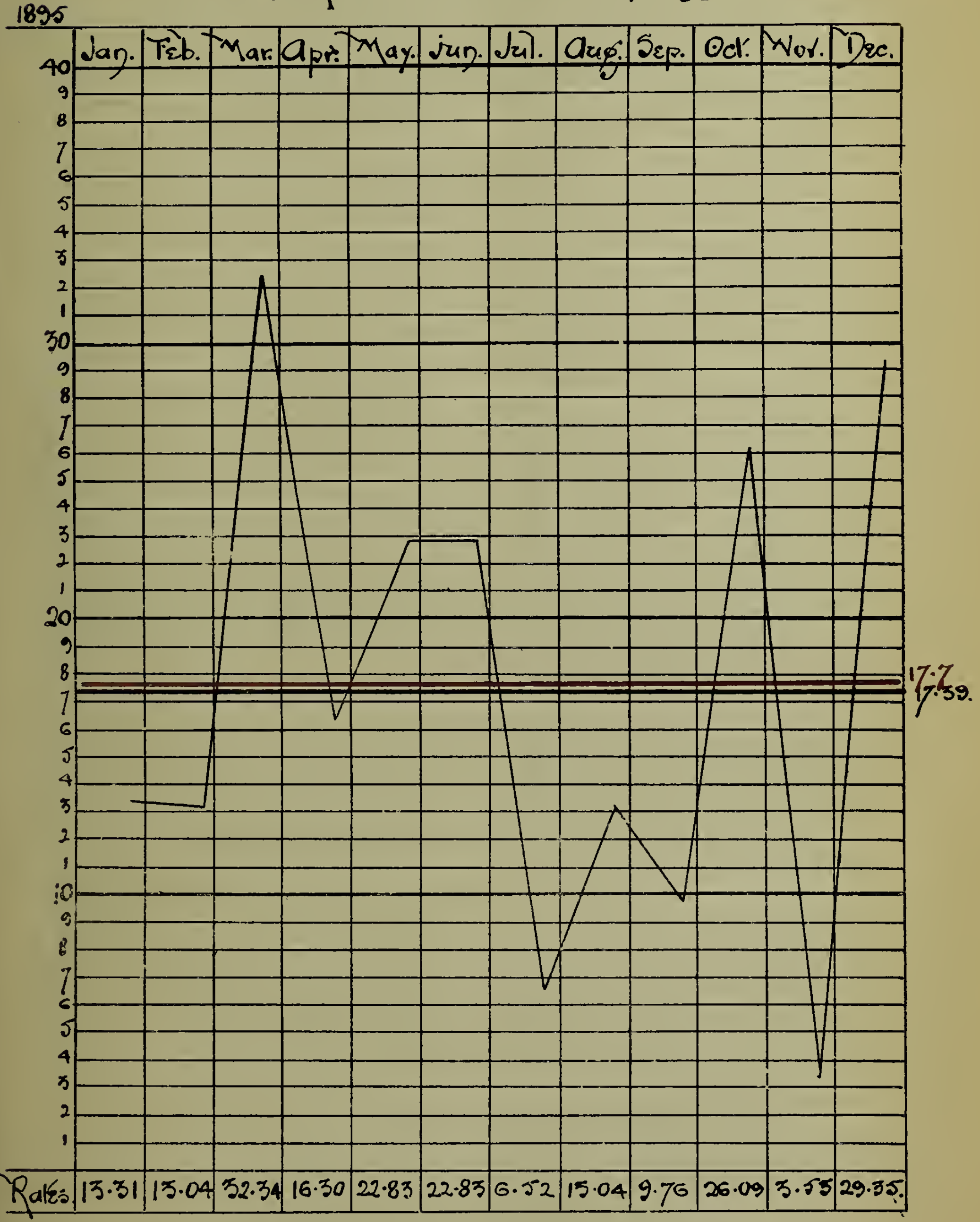


Rates.	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
Rates.	5·61	7·48	7·48	18·71	13·72	21·83	18·71	14·93	29·94	18·71	13·25	33·68

Straight Line in "Black" shews Annual D.R. for the Ward.
" " " "Red" " " " " " " Borough.

WEST CENTRAL WARD

Death Rate per 1000, per annum.

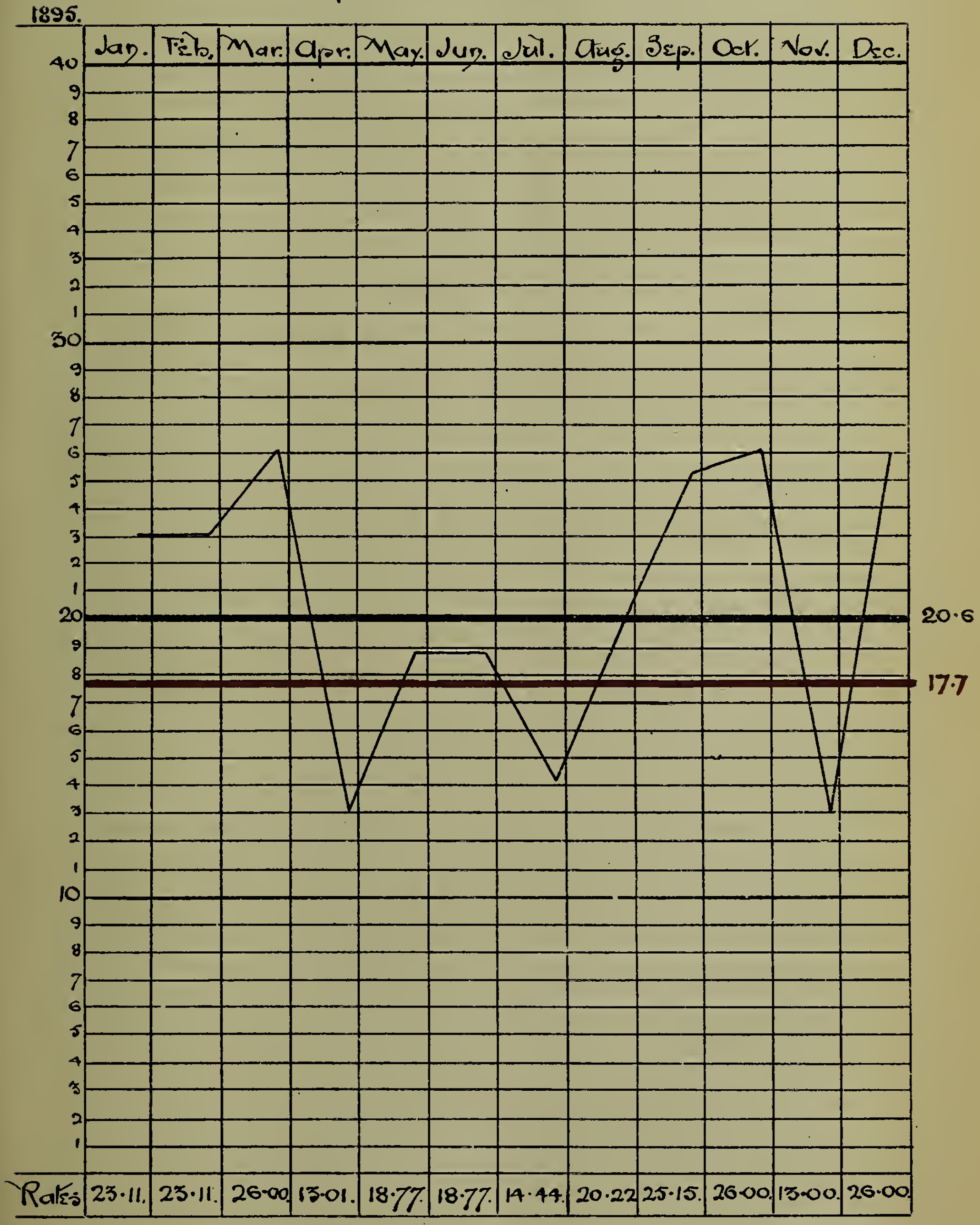


Straight Line in "Black" shews Annual D.R. for the Ward.

" " " "Red" " " " " " "Borough.

NORTH EAST WARD

Death Rate per 1000, per annum.

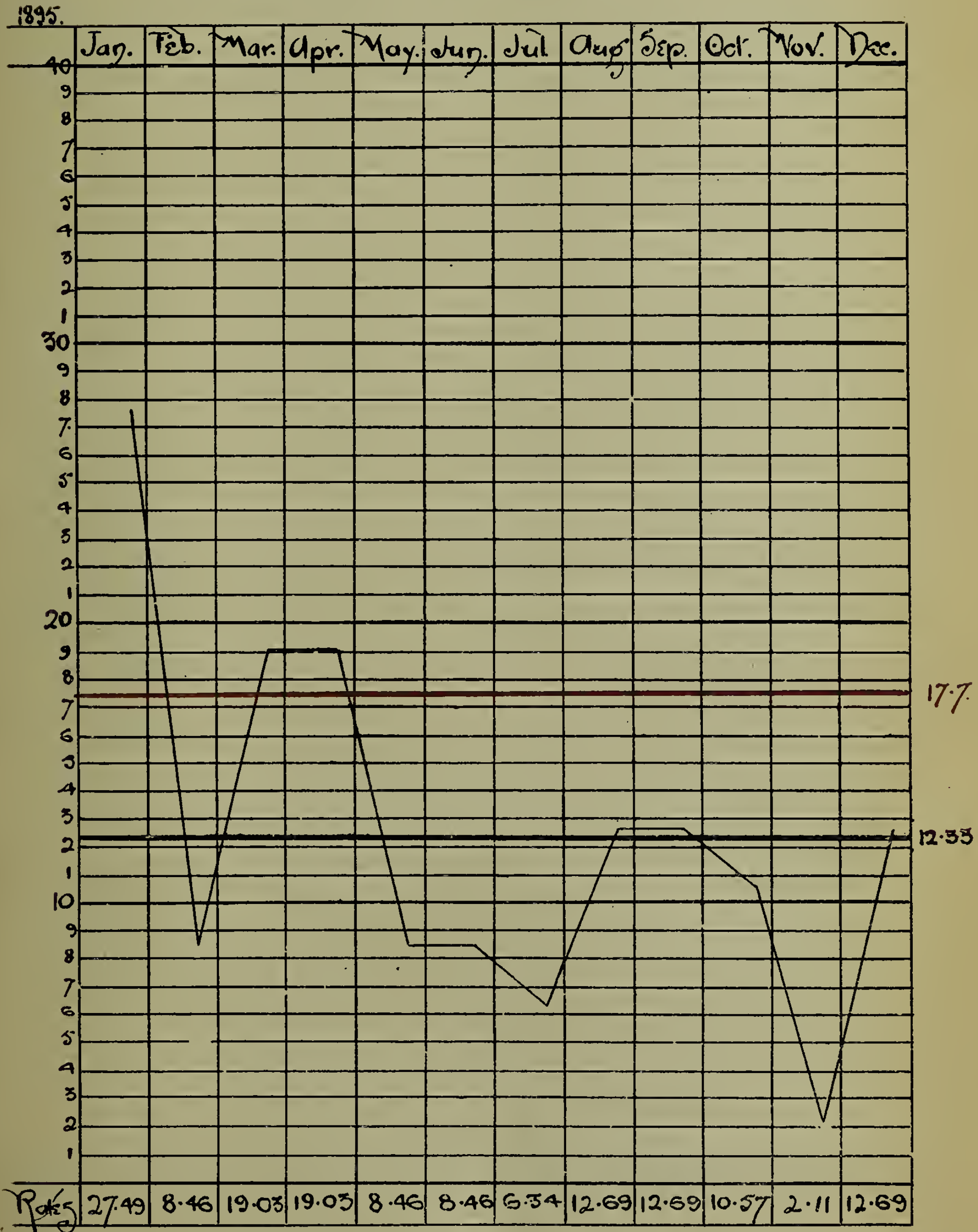


Straight Line in "Black" shews Annual D. R. for the Ward.

" " "Red" " " " " " Borough.

— NORTH WEST WARD —

Death Rate per 1000, per annum.



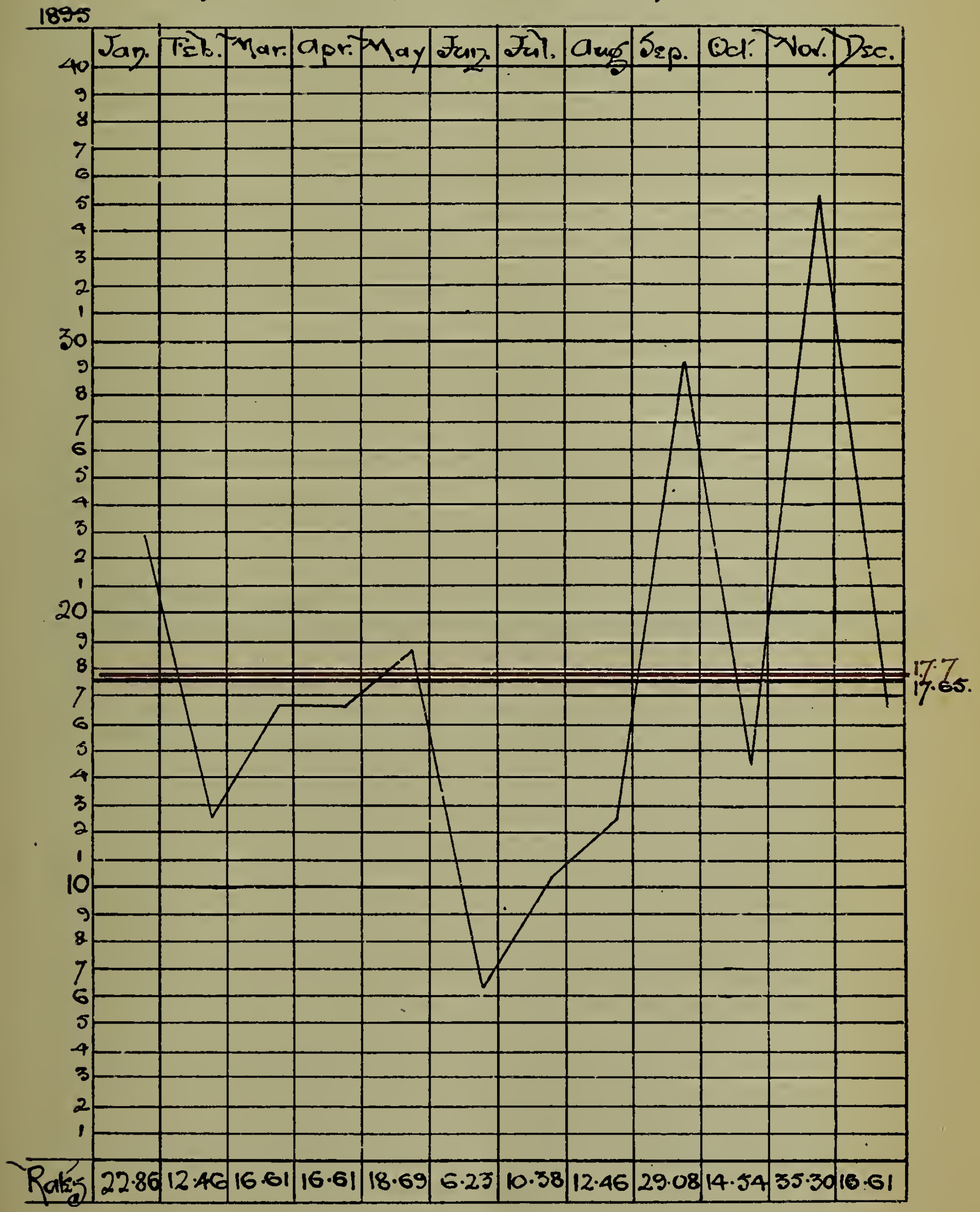
1895.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul	Aug	Sep.	Oct.	Nov.	Dec.
Rates	27·49	8·46	19·03	19·03	8·46	8·46	6·34	12·69	12·69	10·57	2·11	12·69

Straight Line in "Black" shews Annual D.R. for the Ward

" " " "Red" " " " " " Borough.

SOUTH EAST WARD.

Death Rate per 1000, per annum.

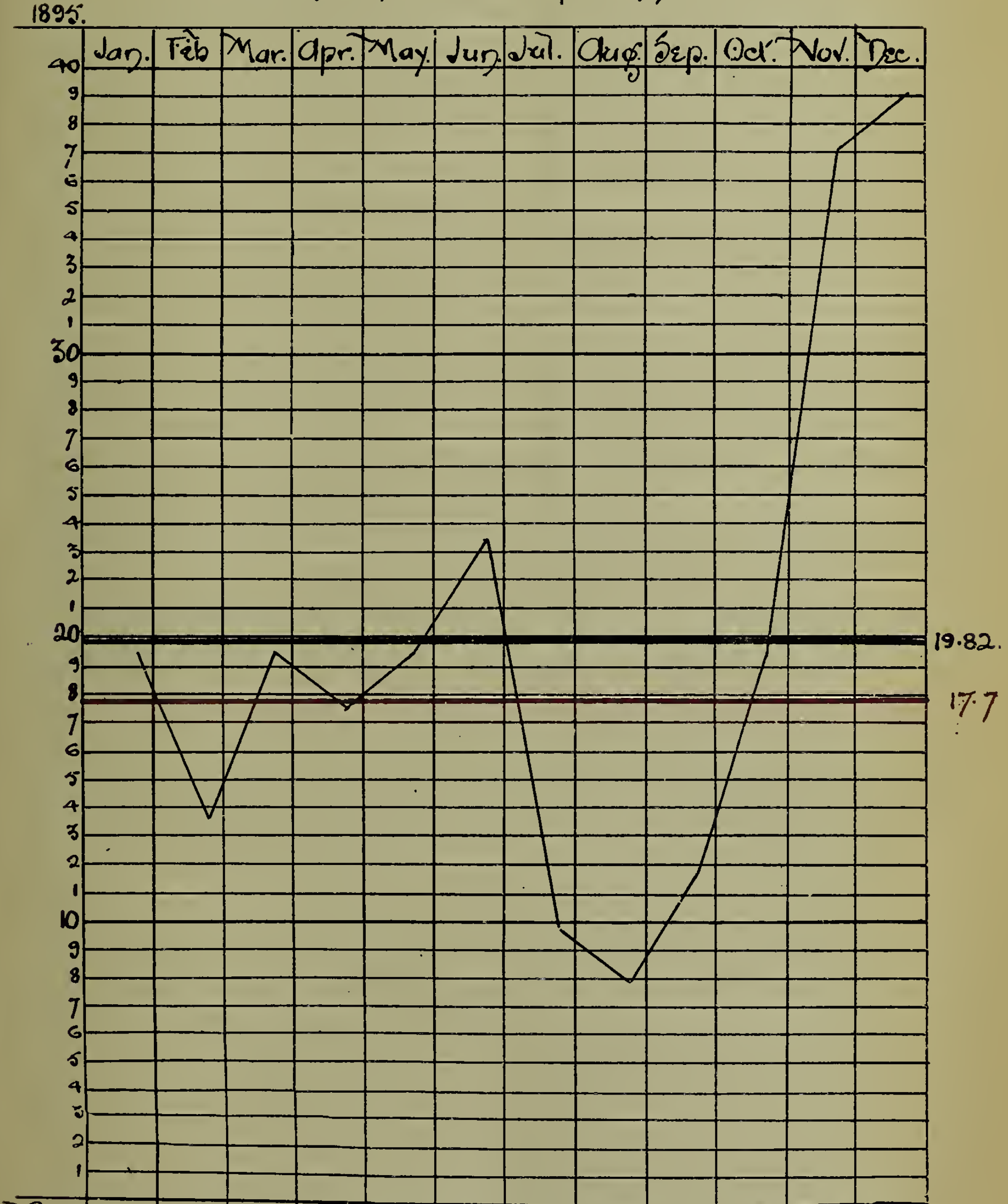


Straight Line in "Black" shews Annual D.R. for the Ward.

" " "Red" " " " " " Borough.

SOUTH WEST WARD

Death Rate per 1000, per annum.



Rates	19.50	13.65	19.50	17.55	19.50	23.40	9.75	7.80.	11.70	19.50	37.06	39.01

Straight Line in "Black" shews Annual D.R. for the Ward.
" " " "Red" " " " " " " Borough

IN TABLE VII.

I have analysed the causes of death, and so far brought down the results to certain limits, but to still further narrow down this information to a more practical point, I here give some charts which graphically represent the deaths and death-rates for the several Wards into which the town is divided. The first chart shows the total number of deaths for each month of the year, whereby it is seen that the lowest figure was reached in July, and the highest in December. The rainfall is also given in inches and tenths of inches to see if there is any direct relation between the two. For the first half of the year these two lines run fairly parallel, but in July a noteworthy change occurs; in this month there is the best record in mortality, but the highest rainfall for the year; how far the reduced death-rate is due to a thorough cleansing of the sewers by the heavy rainfall is mere speculation, though perhaps not without some show of reason, as in September the mortality line takes an upward curve, whilst that for the rainfall goes in the opposite direction; perhaps if we had not experienced such dry weather at that time the number of deaths from diarrhœa might have been fewer. During the three closing months of the year the curves run fairly well together. On this chart also I represent the deaths from Respiratory Diseases, Zymotic Diseases, and Consumption; and from these lines we gather also some information. For instance, in March the total number of deaths runs up to 61, which is accounted for by the rise in Diseases of the Respiratory Organs. The higher curve of total deaths in September is represented by the rise in all the other causes; and the last, and by far the greatest rise, which occurs in December is seen to be accounted for by the increase in the number of deaths from Zymotic diseases, principally Measles.

The second chart shows the total number of deaths of children under five and persons over sixty years of age. Usually the children are more affected by hot weather and the old people by the cold. This is seen in an appreciable decrease of mortality among the old from July onwards, the winter months being represented by a low curve. This is evidence of the very mild weather we experienced at that time, whilst the curve of the young persons runs down from 21 in June to 12 in July, influenced no doubt by the heavy rainfall, from August it takes rapid strides upwards. The cause of this is not far to seek; the hot weather of September, with the prevalence of Diarrhœa, accounts for this, and the great onset of Measles later on, with its fatal effects, is recorded in the upward curve at the finish.

CENTRAL WARD.

The annual death-rate for the Ward is seen to be ·7 lower than that for the whole Borough. In September a sudden rise takes place up to 29·94 per 1,000 of the population. This is accounted for by the greater number of deaths of infants, Inanition causing 7, Diarrhœa 2, Enteritis 3, Whooping Cough 1, and Measles 1. The highest point, however, is reached in December, when the death-rate for the Ward was 33·68 per 1,000, caused by 4 deaths from Measles, 3 from Croup, 1 Enteritis, 1 Inanition, 2 Convulsions, and 2 Bronchitis.

WEST=CENTRAL WARD.

The annual death-rate here is slightly below that of the whole town. The highest point was reached in March, when 32·34 per 1,000 was reached, the larger number of deaths occurring among persons from 35 years upwards. and principally from Heart Disease and Bronchitis. Afterwards the heaviest months were October and December, when 26·09 and 29·35 per 1,000 respectively were reached. In October the children contributed the most, Gastro-enteritis being responsible for 3 deaths. In December there were 3 deaths from Measles of young persons, and 2 from Bronchitis among the older ones.

NORTH=EAST WARD.

The annual death-rate was 20·6 or 2·9 above that for the whole Borough, for which Measles accounted for 9 deaths and Typhoid Fever 2 deaths. The increase in March, as seen by the high curve on the chart, was due to deaths from Bronchitis, Pneumonia, Croup, Convulsions, Premature Birth, and Inanition. Again in October the rate goes up to 26·01 per 1,000, as the result of Chest Affections, Inanition, Diarrhœa, and Enteritis. December also sees a death-rate of 26·00 per 1,000, caused by Bronchitis, Measles, and Croup.

NORTH=WEST WARD

Has a remarkably good record for the past year, the death-rate being only 12·33 per 1,000, and 5·3 per 1,000 below that for the whole Borough. The highest curve is seen in the first month of the year, when Bronchitis was responsible for 6 deaths.

SOUTH=EAST WARD

With a death-rate of 17·65 per 1,000 runs very close to that for the Borough. The two months which have the highest curves being September and November, the first-named month with a rate of 29·08 per 1,000 was influenced by Heart Disease 2 deaths, Consumption 3, Convulsions 2. In November the principal diseases which prevailed were Bronchitis 3 deaths, Croup, Measles, and Typhoid, the remaining diseases being of the ordinary and non-preventible kind.

SOUTH-WEST WARD

Had a death-rate of 19·82, or 2·1 above the Borough. The Zymotic Diseases which prevailed in this district were Typhoid Fever 3 deaths, Whooping Cough 1, Scarlet Fever 2 (the only 2 cases in the whole town), and Measles 18. The curve is seen to take a very sudden rise in November, and attain a still higher rate in December, the reason for this being the heavy mortality from Measles. I have not had a sufficient amount of time at my disposal to thoroughly investigate the particular run of the Measles epidemic. I am unable to give any reason why this particular Ward should have so many cases. The information, however, which I have gained and so far been able to represent on paper will prove of great help in my guidance in the future, and I promise you that nothing shall be left undone to bring this to a practical issue, with, I hope, some good results.

FARMS AND DAIRIES.

During the year Mr W. H. Eccles and I inspected 106 Farms situated within the Borough. In a great many cases the Bye-law requiring the Cowsheds to be whitewashed twice a year had been ignored, the reason being that this could not be done whilst the cows were kept up. This want of attention to a matter of such importance, yet requiring so little labour on the part of the tenant naturally leads to a certain amount of negligence in other directions; and it was not surprising to find some of the places in a neglected condition. The farm buildings being mostly of an old-fashioned type, the accommodation in many of them was found quite insufficient for the number of cattle kept, the space per head of cattle averaging from 228 cubic feet and upwards, in the majority of places the smaller number prevailing, this want of space generally being in the direction of height of shippon, the usual height being 7 feet. The reason for this is not far to seek. The general opinion among the farmers being that excessive warmth, even at the expense of ventilation, is necessary for the greater production of milk, and so to aid this the ceilings of the shippons are lowered and all means of ventilation plugged up; it was quite the exception to find almost any kind of ventilators in use, as these are deemed derogatory to the purpose in hand, viz., the greatest production of milk, at even the cost of health to the animals.

The stall accommodation in this district is also much below that required for the preservation of health; they are usually double ones, measuring 6 feet square. This compels the close aggregation of the cattle, and the consequent breathing of expired air, thus facilitating the spread of Tuberculosis by direct inhalation; consequently, should one cow be diseased there is great danger of the whole lot becoming infected. The importance of this matter calls strongly for a greater allowance of floor space, also for better ventilation at the head of the stalls to ensure a larger proportion of fresh air, and means also of carrying away the large amount of flatus which these animals expel.

The lighting of the shippons also needs attention, many of them being almost in entire darkness. This can only encourage dirt and disease from the tendency to overlook the darker parts of the buildings in the ordinary cleansing operations.

The shippon floors in many places have been allowed to fall into bad repair, the result is the accumulation of liquid manure beneath the floor, giving off fetid and disagreeable odours. It is also a too common practice to place small manure tanks underneath the floor of the cowshed, which have either to be emptied by hand at frequent intervals or are allowed to overflow into a tank outside. It is hardly necessary to point out the danger of this method; the disagreeable odours associated with it should be a sufficient proof of its risk. Notwithstanding this the evil exists to a large extent.

Another matter calling for comment is the practice of storing hay for a part of the season (and that when the cows are kept up) in the body of the barn, into which the front of the stalls open, thus cutting off the ventilation which such an open space commands.

The difficulty of obtaining an efficient supply of water at these isolated spots is one of such importance as to require immediate attention; not only does the risk of milk contamination become very great, but the ordinary means of thoroughly cleansing the cowsheds is absent. Consequently an important part of the farmer's work goes by default. It is the exception to find a supply of water inside the building, whereas this should be the rule.

Another matter of even greater importance is the want of attention to the animals themselves, especially the udders, which should in all cases be washed before milking operations begin. This also applies to the hands of the persons milking the cows, before doing so.

Five of the farms were not tenanted.

DAIRIES.

The practice in this district of conveying out the milk twice a day has led to the partial disuse of many dairies, still the necessity for having proper places for storing milk even for a short time still exists. This, I am sorry to say, does not obtain at the majority of the farms. Many were found to be dark, damp, and badly ventilated; and in some cases they were used for almost any other purpose than the legitimate one, such as for storing food, and washing clothes in.

As the result of our visits, recommendations for repairs and alterations were made in 61 cases, and 33 notices for the work to be done were served. Besides these, letters were written to others requiring the work to be done, and some were seen personally. Since this was done the Farm Inspector has re-inspected a large number to ascertain if any progress had been made, and in 28 of them he reports that the necessary alterations had been effected. Notwithstanding this a very great deal still remains to be done to render these farms and dairies what they ought to be. Naturally, I was anxious at first to deal gently in all cases and not insist on more than could be reasonably expected, in justice to both landlord and tenant; but I hope each year to be able to report to you a better state of things, so that eventually we shall have the farms in this district at least in a perfect sanitary condition.

MILKSHOPS.

There are 13 of these, from which milk is retailed out; they have, with one exception, been visited, and all of them were found in a fair condition. The one exception has only recently been opened.

CENTRAL WARD.

There are 1,549 houses in the Ward, with an estimated population of 6,970. The following sanitary arrangements exist :—

Baths, 131 ; washstands, 162 ; water closets, 212 ; ashtubs, 1,125 ; ashpits, 168 ; excreta pails, 1,298 ; cesspools, 12 ; waste water closets, 94 ; and urinals, 21.

There are a number of closets in Sarah Street which are hand flushed, and as this system is never carried out as it should be, and whereas a nuisance is thereby caused, it is proposed to put them on the waste water system.

Many of the back yards are flagged and in good order.

Many of the shops are provided with dustbins, which are emptied daily, thus doing away with the risk of nuisances, which might arise from the collection of shop refuse.

WEST-CENTRAL WARD.

The number of houses is 859, with an estimated population of 3,865.

There are—Baths, 62 ; washstands, 117 ; water closets, 161 ; ashtubs, 427 ; ashpits, 142 ; excreta pails, 563 ; cesspools, 16 ; waste water closets, 32 ; urinals 9.

There is one cellar dwelling off Cochran Street.

NORTH-EAST WARD

Contains 1,941 houses, with an estimated population of 8,735.

Baths, 66; washstands, 82; water closets, 51; ashtubs, 1,619; ashpits, 96; excreta pails, 1721; cesspools, 18; waste water closets, 165; dustbins, 4; urinals, 1.

There are 14 back-to-back houses. These are situated principally in Union Street and Back Union Street. As this class of property cannot have the necessary amount of ventilation, it is very desirable to make them where practicable into single dwellings.

At 13, 15, 17, 19, and 41, Holden Fold, there is no accommodation for ashes, and only one pail for the five houses. The sanitary arrangements are not satisfactory.

NORTH-WEST WARD

Contains 1,103 houses, with an estimated population of 4,964.

There are 89 baths, 129 washstands, 116 water closets, 708 ashtubs, 122 ashpits, 794 excreta pails, 23 cesspools, 21 waste water closets, and 3 urinals.

The back yards of 80, 81, 82, 83, 84, 85, and 86, Wood Street, are reported by the the Inspector to be in a bad condition.

SOUTH-EAST WARD

Has 1,274 houses, with an estimated population of 5,733.

There are 6 schools, 14 mills, 34 farms, 4 workshops, and 5 cellar dwellings. Also, 1 dustbin, 39 baths, 51 washstands, 48 water closets, 920 ashtubs, 109 ashpits, 1,079 excreta pails, 45 cesspools, 48 waste water closets, and 7 urinals.

The large number of cesspools in this Ward is accounted for by the farms and outlying houses.

SOUTH-WEST WARD

Has 1,419 houses, and an estimated population of 6,385.

86 baths, 96 washstands, 125 water closets, 907 ashtubs, 147 ashpits, 1,191 excreta pails, 13 cesspools, 55 waste water closets.

There are 10 cellar dwellings, 28 back-to-back houses at Astley and Back Astley Streets, 2 in Livesey Place and Willow Terrace, 2 in Naylor Street.

The total number of sanitary conveniences in the town are as follows:—

Baths	473	Excreta Pails	6,646
Washstands	637	Cesspools	127
Water Closets	713	Waste Water Closets	415
Ashtubs	5,706	Urinals	41
Ashpits	784		

The open ashpits, especially when exposed to the weather, are rapidly being done away and replaced with tubs. Even when covered in it is not advisable that such large accumulations of filth should be allowed to lie in close proximity to dwelling-houses for the length of time it takes them to get filled up.

During the summer I issued instructions to householders to prevent the danger of disease by burning each day the vegetable and animal matter which result from cooking operations. That this is done in many houses I have no doubt, but there yet remains a large proportion of the population to which this advice is a dead letter. The habit of mixing all domestic refuse in an ashpit to rot and become foul is fraught with danger, and the most certain method of preventing this is to institute a weekly collection of ashes in all cases. This is not an economic measure where ashpits are in use; rather should the method of more frequent removal be adopted than court danger by encouraging the use of ashpits.

The large number of cesspools still in use in the Borough is on account of the number of farms and the number of houses in outlying districts. I think before another year is out this matter will be improved still further by abolishing all such arrangements which are connected with houses in the town.

One pleasing feature is the rapidly increasing number of waste water closets. It is not too soon to pass judgment upon this system. They prove themselves cleanly and perfectly satisfactory to the people who use them. That this is the case is a strong argument in their favour. One of the complaints which has been made against them is the danger of them becoming frozen up, and thus for a portion of the year being rendered useless as well as a possible source of danger. During the winter of 1893-4, which was particularly severe, there was only one of these closets frozen up, and that was due to structural defects. The only danger which so far has been experienced is the risk of them becoming blocked by means of old tins, bricks, etc., which are sometimes thrown down by children and vicious persons. Still a strict supervision will, I feel sure, prevent this, and where the offence is repeated a summons against the offending person or persons would act as a deterrent.

During 1893 there were 123 new pails put in. Of this number 12 were put in at farms, 2 at public-houses, 3 at Highfield School, and 56 in houses. There are then 61 pails in use at places where the system of waste water closets is specially adapted for. The remaining number of places are of such a nature that the pails are the only method which can be carried out.

In 1894, there were 116 new pails added. Twelve of these were sent to farms, 31 to mills, 8 to shops, 11 to schools, and the remainder—viz., 22—to private houses.

In 1895, 46 pails were added, 9 of these being to farms, 3 to Bolton Road School, 2 to St. Cuthbert's School, 1 to Holy Trinity School, 1 to the Alexandra Hotel, 5 to Darwen Mills, 6 to the Anaglypta Works, the remainder being in use at private houses, &c.

These figures show a marked decrease in the number of pails which are added each year, but there are still many places at which they are in use where it is evident that some other principle would be preferable. All public places, such as mills, public-houses, and schools seem to me specially adapted for a waste water carriage system. That there is danger in so many people using the same pail has been proved, and it is easy to see how this comes about from slight and undetected cases of Typhoid Fever, where the person continues at work and naturally using the closet much more frequently than he otherwise would do. The dried fæcal matter containing the germs of Typhoid is allowed to lie about for days; the said germs become liberated and contaminate articles of clothing, from whence they are inhaled or taken into the system in some other way.

During the year just past Messrs. Lightbown introduced the Latrine system at their Dove Mill. I have made many enquiries as to the working of these closets, and have heard nothing but commendation. So much so that they have decided to adopt the same at the Brookside Mill, at even a larger expenditure, in consequence of the greater length of drain needed.

One of the objections which has been raised against this system is the facilities which it provides for doing away with "waste"; that this does not hold good has been amply demonstrated by Messrs. Lightbown. The danger of the drain becoming blocked may be avoided by placing an inspection chamber at some point of its course, and, if necessary, a grid to stop any large article which may have been thrown down and which would block the drain.

At present the excreta is collected weekly during the day time, and poured from the pails into drags, which hold the contents of about 56 pails. During the year 6,181 loads, weighing about 5,871 tons, were removed.

The pails are afterwards washed and disinfected.

The manure is then carted on to farm land, and as far as practicable the Corporation Bye-Law is observed, viz.: "That no liquid manure shall be deposited on to land "(unless ploughed in) within 150 feet of any school, building, footpath, &c." Special attention is given to prevent the pollution of any water supply.

The majority of mill closets are emptied and cleansed twice a week.

The household refuse is collected periodically, the whole of the ashpits and ashtubs are now being gone through every nine or ten days. During the month of July a daily collection of fish, garbage, &c., from the Market, fish dealers, and shops in the main thoroughfares was instituted, and has worked admirably.

This refuse is deposited on to land at Blacksnape owned by the Corporation, and is then covered with lime and soil. It is thus allowed to lie for a few weeks, and then sold as manure to farmers.

The street refuse generally is carted to the various tips, of which there are eight in number in different parts of the town. These tips are regularly inspected, and every attention is given to them to prevent a nuisance, by having them covered with gravel, soil, or mill refuse.

Most of the tips are becoming filled up, so that the day is not far distant when this matter will need your attention.

The tip at Oakenhurst is already filled in ; this makes the collection from the Cup district an expensive matter.

Ashbins are being used at fish dealers and fruiterers ; these are emptied daily, and the contents taken to the farm land previously mentioned.

Street Scavenging.—Nearly the whole of the streets are swept once a week and private passages once a month. The daily average length of streets swept by the machine is 1·84 miles, and by hand 3·55 miles.

Sewerage.—There are about 30 miles of public sewers ranging from 8in. to 18in. in diameter. The main outfall and intercepting sewers are about 3½ miles in length, and are egg-shaped in construction. Manholes are provided at the junction of every street and deviation of the line of sewer, thereby rendering the means of access very easy, and preventing the costly proceeding of breaking up the streets. Owing to the hilly nature of the town and the large rainfall which occurs, the sewers generally are kept from deposit without the aid of mechanical flushing. The system of ventilation adopted is the one known as the open system, and little if any nuisance is experienced. I consider that what sewer gas is generated arises mostly from the lower levels, and thence rises to the highest levels, rendering disconnection of drains from dwellings most requisite, and this is being insisted on. The normal flow of sewage to the main works is estimated at 800,000 gallons daily, and for the purification of this mass of material new works are in course of construction at Oakenhurst, the total capacity of the new tanks, of which there are six, is 850,000 gallons. The filter beds are twelve in number, and have a total area of 1,616 square yards. These are expected to be working early in the spring. The Sewage Works for the district of Hoddlesden are complete and in working order. The tanks are two in number, and there are two filter beds. The normal flow of sewage is 9,000 gallons a day. It is proposed to treat the sewage at the main works on the International system, together with land filtration.

THE WATER SUPPLY is got from a gathering ground about 650 acres in extent, the whole of it is situated on the west side of the town, running from a point slightly above Lyon's Den Farm to near Sunnyhurst plantation, the highest point being at an altitude of 1,250 feet above the mean water level of Liverpool. There are two reservoirs, viz., Earnsdale and Sunnyhurst. The capacity of the Earnsdale Reservoir to the level of the sill of overflow is 97,326,000 gallons, and that of Sunnyhurst Reservoir to the same level is 94,144,000 gallons; both reservoirs to a certain extent are fed from the same sources. The average daily consumption for trade and domestic purposes is 480,00 gallons, which, after deducting quantity for trade purposes, gives an average daily consumption per head of about 11 gallons. The nature of the water is soft, such as characterises moorland water, and has a distinct action on lead pipes. The addition of a lime salt neutralises the acidity, and thus prevents any further action. The supply is ample for the present needs of the town and for some time to come.

LODGING HOUSES.

There are no Lodging Houses registered in the Borough. What were used as such have been pulled down under the new Improvement Scheme. Owing to the want of this kind of accommodation, and especially to meet the requirements of the migratory population of hay-makers, the Borough Engineer was instructed to provide temporary accommodation. The building originally used as a Workhouse, and which is situated near the centre of the town, was last June put into good repair and let out as a Lodging House to a man and his wife. They provided the furniture and beds, and now the following is the accommodation which is available :—One room of fair proportions has 27 beds in; in a room over this there are 18 beds, with a portion screened off, which forms a smaller bedroom, supplied with four double beds. There is also a small room next to that occupied by the landlord and his wife, in which there is one double bed, making a total of 50 beds.

The house kitchen is a room of fair size, in which there is a wash boiler, so that this place is also used as a wash-house.

A large room is set apart as a day-room for the lodgers, in which they cook and take their meals. They have also to store their provisions there; a place is partitioned off for storing parcels and food.

There are three closets on the pail system, and a urinal.

Underneath these day rooms are some stables used by the Corporation.

On my last visit the bedrooms were clean and well ventilated, the lighting very good, and there was no evidence of over-crowding. The usual complement of lodgers at night is between 20 and 30.

The stabling of horses under the living rooms is opposed to principles of sanitation. This arrangement is only a temporary one for the lodgement of people usually affecting these places.

Plans have been submitted to the Local Government Board for new premises, which I hope will be proceeded with without any unnecessary delay. The absence of this kind of accommodation renders it very difficult to deal with cases of over-crowding which occasionally come to our notice.

THE INFECTIOUS DISEASES HOSPITAL

Is situtated on the south side on the highway to Bolton, and is 2 miles 146 yards from the centre of the town. It stands in its own grounds, which are laid out and planted with shrubs.

The Hospital is composed of two blocks, running east and west, so that they have both a southerly aspect. In the larger block are two wards, each capable of holding six beds. This accommodation can be increased to eight beds in each should occasion require. In connection with each ward there is a day-room provided with the usual furniture, and with books and games, wherewith the patients may make their enforced residence less tedious.

The kitchen is situated in the middle, and is provided with a window at each end, through which the two wards are kept under observation. There is a bath-room. The bath is on wheels, so that it can be wheeled into the wards and thus render this operation much more agreeable to the patient. The surgery is situated in this block, and is complete in its supply of drugs.

The other block, which is smaller, has also two wards, each affording accommodation for two beds, which can be extended to three.

There is a large room which is usually occupied as a sitting and bedroom by the nurse when one is kept. The kitchen is placed on the south side, an arrangement which is not satisfactory, as the provisions are kept there, and this position might be more suitably utilized as another ward. The caretaker's bedroom leads off this, but the room is too small, and not sufficiently ventilated. The scullery also leads off the kitchen. The sink, which is in the latter place, should be in the scullery.

A drawback about these arrangements lies in the fact that a view of the wards is not commanded from the kitchen, nor from the nurse's room.

All the rooms are warmed by means of hot-water pipes, and have open fire-places as well, except the two large wards in the north block, which are warmed by stoves.

The lighting and ventilation are good.

The closets, all of which are in the different buildings, are earth closets, and seem to act fairly well. They are, however, not sufficiently separated from the rest of the building by means of passages. This is a matter which should be attended to.

During the year four patients were admitted, all being cases of Typhoid Fever.

NAME.	RESIDENCE.	Date of Admission.	Disease.	Date of Discharge.	No. of Days.
William Lane	3, Ellison Fold......	Oct. 29th	Typhoid Fever	Died Nov. 8th	11
James Durkin	43, Howarth Street	Nov. 23rd	,,	1896. Jan. 2nd	40
Rudolph Durkin ...	,, ,,	,,	,,	,, ,,	40
John Wm. Durkin...	,, ,,	,,	,,	,, 18th	56
					147

On the 24th November, a nurse was sent from the Blackburn Infirmary, and she took charge until January 2nd, 1896, when her services were dispensed with, as only one patient remained in the Hospital.

It is impossible to secure perfect isolation in the majority of houses occupied by the working class, and so long as we have infectious diseases always with us, the question is then forced upon us—What is best to be done with these cases? There are two diseases which from their peculiar conditions render them absolutely necessary to be perfectly isolated such as can be done in a Hospital.

The first is Typhoid Fever, not from the fear of direct infection, but from the great care which is required in the treatment and nursing arrangements. I feel sure that with the care which can be secured in Hospital many lives would be saved from this disease, and the cost of maintenance would be as nothing as compared with the return in the shape of so many lives restored to the community.

The second disease is Scarlet Fever, which should be isolated on account of its fierce infectiousness, and were the patients sent to Hospital we should be saved the risk of an epidemic which so surely visits us at certain periods, and many lives would be saved for future usefulness.

On January 14th, a carcass of beef was seized at the Slaughter-house, and condemned by Dr. Armitage, the late Medical Officer, and destroyed.

February 15th, a cow, removed from Hey Fold Farm to the Slaughter-house, was found to be suffering from Anthrax, and was consequently destroyed, and the premises from which it had been removed were disinfected.

In March, a cow was seized on the premises of Richard Heslop, Butcher, and condemned by the Sanitary Inspector. The carcass was destroyed by order of a magistrate.

Legal proceedings were instituted, which resulted in the infliction of a fine of £20 and costs on the Butcher.

* * *

SUMMARY OF MEDICAL OFFICER'S REPORT

FOR 1895.

Urban Sanitary District of Darwen.

Area in Statute Acres	5919
Population (Census, 1891)	34192
Population (Estimated, 1895)	36000

NAME OF MEDICAL OFFICER OF HEALTH - - F. G. HAWORTH.

SALARY £120.

	Males.	Females.	Total.
Births Registered	541	587	1128
Deaths Registered	321	319	640

Birth-rate	31·3
Death-rate	17·7
Rate of Infant Deaths, under one year, to 1,000 Births	158
Death-rate from the 7 principal Zymotic Diseases	2·1

Diseases prevalent.—Measles. Period.—Six months.

Any schools closed?—All. If so, for what disease?—Measles.

What is the character of the Hospital accommodation?—Isolation for Smallpox sometimes used for Typhoid Fever and Scarlet Fever.

Is it joint or otherwise?—No. Number of beds.—18.

What were the cases treated?—Typhoid Fever.

How is disinfection carried out?—Steam.

Apparatus used?—Washington Lyon's.

Is the Infectious Disease (Notification) Act in force?—Darwen Corporation Act 1887.

Are any diseases not specially mentioned in the Act notifiable?—No.

What is the character of house accommodation?—Principally cottage.

Has any action been taken under the "Housing of the Working Classes Act," 1890?—Scheme in hand for building 50 houses to re-place a large number demolished under New Improvement Scheme.

Water supply?--Town's. Collected from Moorland.

Is scavenging carried out satisfactorily? —Yes.

By Sanitary Authority or Contract?—Sanitary Authority.

How is refuse disposed of?—On land.

What is the character of Drainage and the form of Sewage Disposal?—Single system. Precipitation with lime, aluminica, and copperas.

Canal Boats?—No.

What is the condition of the Bakehouses?—Fair.

Slaughter-house?—One Private, remainder Corporation. Good.

Lodging-houses?—Several.

Are they Registered?—No.

Are the Dairies, Cowsheds, and Milk-shops periodically inspected?—Yes.

Have any Regulations been made by your Authority under the Order of the Local Government Board?—No.

Have the Factories and Workshops been inspected, and with what result?—Yes.

Can you express any opinion as to the effect of Factory Labour on the Operatives?—No.

Sale of Food and Drugs Act.—Number of samples purchased.—None. Prosecutions.—None.

Food unfit for Human Consumption. Amount seized?—420lbs.

River Pollution.

Any Special Report of Medical Officer of Health during the year?—No.

Department of Inspectors of Nuisances.

Number of Notices served.—2,392.

Number of Legal Proceedings taken and result.--Four fines.

Smoke.

Do you suffer from this form of Nuisance?—Yes.

Number of observations?—23.

Number of Legal Proceedings taken and result?—None.

Give approximately, the number of tall chimneys in connection with mills or large works.—80.

Has the Authority adopted:—

(*a*) "The Infectious Disease (Prevention) Act 1890"?—Yes, except Sects. 5 to 11 inclusive, and Sect. 15.

(*b*) "The Public Health Acts, Amendment Act, 1890"?—Yes, except paragraph relating to music and dancing.

⁂

TABLE XVII.

Streets in which cases of Infectious Diseases amongst Paupers have occurred during 1895.

DIARRHŒA has been responsible for eight cases in—

West-Central.	North-West.	North-East.
Back Bolton Street.	Duckworth Street.	Greenfield Street.
Bury Street.	Back Wood Street.	George Street.
Shorrock Fold.		

SCARLET FEVER has appeared in—

North-East.
Edward Street.

TYPHOID FEVER in—

North-East.	
Olive Lane.	Haworth Street.

MEASLES in—

West-Central.	South-West.	North-West.	North-East.
Bury Street.	Townley Brow.	Richard Street.	Daisyfield Street.
		Grime Street.	

GOVERNMENT FORM B.

Table of New Cases of Sickness coming to the knowledge of the Medical Officer of Health during the Year 1895, in the Urban Sanitary District of Darwen, among Out-door Paupers.

		Under 5 Years.	5 Years and Upwards.
Smallpox		0	0
Measles		6	2
Scarlet Fever		0	1
Diphtheria		0	0
Croup (not Spasmodic)		0	0
Whooping Cough		0	0
Continued Fevers	Typhus	0	0
	Enteric or Typhoid	0	4
	Other or Doubtful	0	0
Diarrhœa and Dysentery		3	5
Cholera		0	0
Rheumatic Fever		0	1
Erysipelas		0	0
Pyæmia		0	0
Puerperal Fever		0	0
Ague		0	0
Pneumonia		2	5
Chicken Pox		0	0

ANNUAL REPORT

OF THE

INSPECTOR OF NUISANCES

&c.,

FOR THE

YEAR ENDING DECEMBER 31st, 1895.

SANITARY INSPECTOR'S OFFICE,

DARWEN, JANUARY 27TH, 1896.

TO THE CHAIRMAN AND MEMBERS OF THE HEALTH COMMITTEE.

GENTLEMEN,

I beg to submit my Annual Report of the work carried out in the Health Department during the year ending December 31st, 1895.

Summary of Nuisances dealt with.

No. of Houses and Premises inspected	4,477
,, Nuisances discovered	2,290
,, ,, abated	2,216
,, Notices issued (preliminary)	1,562
,, ,, (legal)	830
,, Letters served referring to Nuisances	176
,, Re-inspections	2,411
,, Complaints received and attended to	209

Description of Nuisances dealt with.

To Open and Flush choked Drains and Gullies	103
,, Refix and cement uneven Gullies	214
,, Disconnect Waste-pipes from Drains	26
,, Repair defective Water Closets	17
,, Repair defective Eaves, Spouting, &c	118
,, Cleanse Yards and Repair defective Flagging, &c., in Yards	139
,, Construct proper Drains	208
,, Cleanse and Limewash dirty Houses and Premises	288
,, Abate Nuisances caused by the overcrowding of houses	12
,, Cleanse and Limewash filthy Closets	22
,, Remove accumulation of Refuse, &c.	39
,, Abate Nuisances caused by the Keeping of Animals	29
,, Provide Closet Accommodation	6
,, Abolish Cesspools and provide proper Closet Accommodation	17
,, Repair Ashtubs, re-build Ash-sheds, and provide proper Covering for Ashtubs	274
,, Repair and lengthen broken Slop-pipes	265
,, Re-build dangerous Walls, Closets, Buildings, &c	40
,, Ashtubs provided in lieu of unsanitary Ashpits	343
,, Miscellaneous Nuisances	56

It will be seen from the above table that 12 cases of overcrowding came under our observation, and in each case notice was served upon the occupiers to abate the nuisance. The overcrowding is chiefly amongst the poorer classes, who generally have a large family of their own, but often take in a few lodgers, which, as they say, "helps to pay the rent." All notices served under this head have been complied with.

A large number of drains have been found to be defective, after the application of the smoke and other tests. Basement drains have been repaired and properly trapped; bath and lavatory waste-pipes have been disconnected from W.C.'s; soil-pipes and old pan closets have been re-placed with others of modern construction.

Infectious Diseases.

During the year 130 cases of Infectious Diseases have been notified to this Department, four of which (Typhoid) were removed to the Hospital.

No. of Notifications	130
„ Houses Inspected..................	109
„ „ Disinfected	126
„ Rooms Fumigated............	69
„ Visits to Infected Houses about	230

Bedding was removed from 32 houses to the Hospital to be stoved or destroyed.

ANALYSIS OF NOTIFICATIONS.

MONTHLY.

DISEASE.	JANUARY.	FEBRUARY.	MARCH.	APRIL.	MAY.	JUNE.	JULY.	AUGUST.	SEPTEMBER.	OCTOBER.	NOVEMBER.	DECEMBER.	TOTAL.
Scarlet Fever	4	5	1	6	3	2	4	1	7	3	8	2	46
Typhoid Fever......	...	2	1	3	3	4	2	1	3	3	9	5	36
Diphtheria	...	2	...	...	...	...	...	...	...	...	...	...	2
Erysipelas.....	1	4	1	1	2	1	2	4	2	2	4	3	27
Puerperal Fever ...	...	...	...	...	...	...	1	3	2	...	1	1	8
Memb. Croup	...	...	...	...	...	...	...	...	...	...	3	6	9
Continued	...	...	..	...	...	...	...	...	...	1	...	.	1
Relapsing...........	...	...	...	...	1		...	...	...	...	...	...	1
Total	5	13	3	10	9	7	9	9	14	9	25	17	130

WARDS.

DISEASE.	Central.	West-Central.	North-East.	North-West.	South-East.	South-West.	Total.
Scarlet Fever	5	3	18	...	10	10	46
Typhoid Fever..	3	3	14	1	10	5	36
Diphtheria	..	...	2	...	...	...	2
Erysipelas	7	1	9	4	4	2	27
Puerperal Fever	2	...	3	...	2	1	8
Memb. Croup	3	...	3	1	1	1	9
Continued	...	...	1	...	...	..	1
Relapsing	...	. .	1	...	..	...	1
Total	20	7	51	6	27	19	130

Common Lodging House.

At the temporary lodging house at the Old Workhouse there are 50 beds, and accommodation for over 60 persons.

These premises are often visited, and found to be kept in a fairly clean condition.

Factory and Workshops Act.

Under this Act 236 visits have been made to workshops, and nine notices have been served to abate nuisances which have been found to exist. The following is a classified list of workshops as supplied by the Inspector of Factories and Workshops :—

Milliners and Dressmakers	23
Boot, Shoe, and Clog Makers	27
Tailors	9
Confectioners	7
Tinplate Workers	5
Plumbers	4
Smiths	3
Harness Makers..	2
Jewellers	2
Cabinet, Joiners, and Coffin Makers	8
Brush Makers...	1

Picture Frame Makers	1
Herb Beer Makers	2
Chemicals	1
Cycle Repairer	1

A considerable amount of time has been devoted to making inspections of factories and workshops, in company with the Assistant Inspector of Factories.

A fair amount of work has been done with a view to improve the sanitary arrangements in connection therewith, some of which were not in good condition. The owners generally have complied with our requests, and the alterations made will certainly have a beneficial effect on the employees.

Vans Occupied as Dwellings.

Fifty-two visits were made to vans occupied as dwellings, for the purpose of discovering infectious diseases, and noting their condition.

In one instance I had occasion to complain about the dirty condition of the van, caused by the keeping of several monkeys. I gave notice to abate the nuisance, but the owner immediately removed the van, &c., out of the town.

Bakehouses.

The sanitary arrangements have, upon the whole, been satisfactory. It has been necessary to serve three notices to limewash and cleanse. There are at present 16 wholesale bakers and 12 retail.

Smoke Observations.

During the year 24 smoke observations have been taken, and the average time black smoke has been emitted is 15 minutes per hour.

Ten Notices have been served to abate the nuisance, but little has been done.

BOROUGH OF DARWEN.

SMOKE OBSERVATIONS TAKEN DURING 1895.

	BLACK.	MODERATE.	NOT SMOKING.
Spring Vale Brewery	7½	6½	46
Foundry Street Mill	8	3	49
Spring Vale Mill	8½	22½	29
Woodfold Mill	8½	7	44½
South Belgrave Mill	9½	15½	35
Hampden Mill	9½	4	46½
George Street Mill	9½	1½	49
Bowling Green Mill	10	22½	27½
Union Street Spinning Mill	11	16	33
South Belgrave Mill	13	23½	23½
Do.	14	16	30
Hey Fold Mill	14	9½	36½
Barley Bank Mill	15	10½	34½
Vale Street Mill	15½	4	40½
South Belgrave Mill	16	17½	26½
Townsfield Mill	16½	3½	40
Spring Vale Mill	17	19½	23½
South Belgrave Mill	17½	14	28½
Darwen Paper Mill	18	9½	32½
Orchard Mill	19	14	27
No. 1 Spinning Mill	22	3½	34½
Darwen Paper Mill	26	9	25
Do.	32	9½	18½
Do.	35½	10	14½

SANITARY PROSECUTIONS.

The following Table gives the particulars of offences, and the result of the prosecutions :—

DATE.	NAME.	NATURE OF OFFENCE.	FINE.			COSTS.			TOTAL.		
1895.			£	s.	d.	£	s.	d.	£	s.	d.
March 28th...	Richard Heslop	Exposing unsound meat for sale ..	20	0	0	11	0	6	31	0	6
April 19th ...	John Miller ...	Emitting smoke from Traction Engine............	0	5	0	0	9	0	0	14	0
May 7th......	Herbert Pearse.	Driving Tram Engine without licence	0	1	0	0	9	0	0	10	0
Sept. 13th ..	John Miller ...	Locomotive not consuming its own smoke	0	5	0	0	11	0	0	16	0

During the later part of the year every house in the town was visited for the purpose of ascertaining the number of ashtubs, ashpits, cesspools, waste water closets, &c., a complete list of which will be found in the Medical Officer's Report.

I am, gentlemen, your obedient servant,

W. E. MARSDEN, Assoc. San. Inst.,

Chief Inspector.

SCAVENGING DEPARTMENT.

The following Table shows how the Ashes, &c., have been disposed of:—

Bold Venture Tip	... ...	8,079 loads
Holden Fold ,,	... ..	1,634 ,,
Hoddlesden ,,	... ...	216 ,,
Greenfield ,,	... ...	306 ,,
Whitehall ,,	... ...	1,819 ,,
Oakenhurst ,,	... ...	475 ,,
		12,529 loads.

The whole of the Ashpits and Ashtubs emptied by us are cleansed every nine or ten days.

During the month of July a daily collection of fish, garbage, &c., from the Market and dealers in the main thoroughfares, was instituted, and has been the means of reducing the number of complaints, This garbage, &c., is carted to the Corporation land at Sett End, and covered with soil and sweepings. After deodorising a few weeks it is sold as manure.

The public tips have now been reduced to five in number. The one at Oakenhurst has been finished. This necessitates the carting of the refuse to Bold Venture, which makes it very expensive. Special attention is given to the Tips at week ends, which are covered with gravel, soil, or mill ashes. About 36 galvanised dust-bins are now in use at fish dealers, fruiterers, &c.

The Fish Market is swilled three times a week, and is kept as clean as practicable.

During the year 357,915 pails from cottages, mills, &c., have heen emptied and cleansed. To prevent complaints as to the drags being in the streets at mealtimes, we now commence half an hour earlier in the morning. This arrangement enables the men to get loaded and away before the millpeople breakfast, so that under ordinary circumstances no drag ought to be in the streets at meal-times.

Previous to the month of May last, the scavenging of the Market Ground and streets was commenced at 5-0 a.m. on Sunday mornings. As soon as the men had got to work the lamps were being turned out, thus leaving them to do as well as they could in the dark. People were also in the habit of picking up all kinds of fish, fruit, and vegetables left on the Market Ground. To prevent this, I commenced at 11-30 p.m to remove the garbage from the Market, whilst the scavengers are going over the streets. This arrangement is better and cheaper than the old one.

The sweeping machines are used as much as possible, and nearly the whole of the streets in the Borough are swept at least once a week. The principal thoroughfares are swept daily. Attention is also given to all footpaths. The daily average length of streets swept by machine is 1·84 miles, by hand 3·35 miles.

2,965 loads of sweepings have been removed to various tips.

1,632 choked street gullies have been opened.

The public urinals are cleansed and disinfected daily.

I along with Dr. Haworth have visited every farm in the Borough, viz., 132 registered farms and milkshops. The following table shows the sanitary defects, with the results of our inspections.

	NUISANCES EXISTING.	NUISANCES ABATED.
Shippons Unlimewashed	6	6
,, Short of Light and Ventilation	12	6
Dairies Short of Light and Ventilation	16	12
Tanks under Shippon Floors	8	4
Uneven Shippon Floors	9	6
,, Dairy Floors	5	4
Improper Drainage	2	2
,, Manure Steads	6	2
,, Water Supply	1	0
Cesspool Closets	35	7
Dangerous Closets	2	2
	102	51

One new Shippon and two new Dairies have been constructed.

It will be noticed that there is still a large amount of work left undone; this arises through being visited late in the year and the short winter days being so unfavourable to farm repairs. All owners or their agents have been seen or written to, and in every case promises have been given to do the necessary work as soon as the weather is favourable.

Yours obediently,

W. H. ECCLES, Cert. San. Inst,

Scavenging Superintendent and Inspector of Dairies, &c

Report of the Slaughter-House Inspector for the Year ending December 31st, 1895.

Cattle slaughtered as follows:—

Public Slaughter-Houses.

	1894.	1895.
Beasts	1,067	1,137
Sheep	6,756	6,086
Calves	552	584
Swine	800	1,061
	9,175	8,868

Private Premises.

	1894.	1895.
Beasts	546	546
Sheep	5,220	4,470
Calves	33	23
	5,799	5,039

The following have been received in the Public and Private Slaughter-houses from Birkenhead :—

Quarters of Beef	1,382
Sheep	650

These were all in very good, healthy condition.

A large quantity has also come in from Blackburn and other places, and quantities of frozen meat have been imported from New Zealand.

The Old Slaughter-Houses.

During the year 1895 there was rather more tripe, &c., prepared at these premises, amounting to rather more than 4 tons per week, or a total of 209 tons for the year.

I issued 120 licenses to farmers and others for the slaughtering of cattle on private premises. These were all inspected by me prior to the issuing of the licenses.

I have visited the farms situated within the Borough, and inspected all cattle and swine with reference to contagious and infectious diseases, and also to slaughtering without license.

There were two cases of Anthrax, one from Prospect Farm, the carcass of which went to Blackburn; the other from Hey Fold Farm, which was brought to the Slaughter-house on February 22nd.

There have been no cases of Swine Fever.

The following was the amount of meat condemned as unfit for food :—

Beasts	7	Swine	2
Sheep	11	Odds	300lbs.
Calves	4		

Making a total of 2 tons 9cwts. 1qr. 9lbs.

I remain,

Your humble servant,

WM. BICKERSTAFFE.

N. Leach, Printer and Bookbinder, "Advertiser" Office, Bolton Road, Darwen.